

10-11 May
2023

2nd Annual Conference Of Post Graduate Studies for Applied Science

المؤتمر السنوي الثاني للدراسات العليا
للعلوم التطبيقية بجامعة بنها

Under Auspicious of

Prof. Mohamed Ayman Ashour
Minister of Higher Education
and Scientific Research

Prof. Gamal Sosa
President of Benha University

Prof. Nasser El Gizawy
Vice President for Post Graduate
Studies and Research

Prof. Tamer Samir
Vice President for Education and
Students Affairs

Abstract Book





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PGASC

2nd Annual Conference of Post Graduate
Studies for Applied Science

المؤتمر السنوي الثاني للدراسات العليا
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ABSTRACT BOOK

Organized by

Benha Journal of Applied Science

Benha University, Egypt

Website: <http://www.pgasc.bu.edu.eg>



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About Conference :

2nd Annual Conference of Post Graduate Studies for Applied Science - Benha University. The annual conference for graduate studies in the field of applied sciences, which is organized annually by the Post Graduate Studies and Research Sector at Benha University with the aim of capacities building of students and young researchers in presenting and discussing research papers or scientific articles in the various research areas of applied sciences.

Conference Objectives:

- 1) Opportunities for networking between Benha University graduate students and other universities.
- 2) Deepening the scientific research methodology for postgraduate students.
- 3) Providing an environment for students to present their scientific research experiences in their theses.
- 4) Giving the opportunity for postgraduate students to participate in the exhibitions of ideas.
- 5) Achieving the university's objectives in supporting students' research projects.



President word

Prof. Gamal Sosa



Scientific research is one of the most important duties of universities and research centres in order to qualify scientific Pioneers to improve society and meet the development and policy requirements.

Benha University always strives to support, motivate and appreciate outstanding faculty members, young researchers and students, affirming their important and influential role in developing the educational and research process and serving the community. The university's interest in scientific research comes as one of the pillars of creativity and innovation, the development, enrichment and dissemination of knowledge and seeking to use it to solve the various problems facing society and the industrial sector.

Since scientific research holding the name of the university is one of the most important indicators of quality and excellence in its classification locally, regionally and internationally, Benha University is keen to support the activities of scientific research and those in charge of it from faculty members, researchers and students to achieve its goals of growth, economic development and raising the standard of living for members of society. This may lead to changing the quality of life for the entire community and increasing its prosperity.



Conference President word

Vice President

for Post Graduate Studies and Research

Prof. Nasser El-Gizawy



The new competitive conditions resulting from the knowledge economy and the challenges of the fourth and fifth industrial revolution make it imperative that universities put in place new policies that promote innovative capacity-building and innovation. The development tools are used to connect universities with the industrial sector as an effective step towards achieving one of the State's objectives in the Science, Technology, and Innovation Strategy 2030, namely, "to create a conducive and supportive environment for science, technology and innovation", to encourage the application of

scientific research outputs and to deepen local industrialization.

In view of the Egyptian universities distinction in a number of scientific disciplines (engineering and technological sciences, physical sciences, life sciences, clinical and health sciences) according to the British Times rating of higher education institutions, Benha University is currently aiming to serve as a leading model for Egyptian universities in education, scientific research and undergraduate and community life. The university is encouraging innovators to contribute to the community, and to turn innovative ideas and inventions into economically valuable products, raising the university to a top regional and global level of innovation.

Therefore, the university is seeking to invest in knowledge and transform third-generation universities to harness knowledge to build a positive work environment and culture that supports innovation and continuous development in the service of development and the national economy, and to apply systems and mechanisms that promote the participation of government institutions and the private sector in the application of innovation efforts and participation in achieving the strategic goals of the state in critical areas. This will lead to achieving an active and sustainable partnership between the university and the public and private sectors, contributing to development, and helping to support new projects based on the generation of ideas and creativity.



Conference Coordinator word

Vice Dean for Post Graduate Studies and Research
Faculty of Medicine

Prof. Hesham Rashid



In the beginning, I would like to thank His Excellency the President Benha University Prof. Gamal Sosa and His Excellency the Vice President of Benha University for Post Graduate Studies and Research Prof. Nasser Al-Gizawy for their confidence to participate in organizing the 1st Annual Conference of Post Graduate Studies for Applied Science Benha University, which aims to bring together young researchers at the university and abroad under the slogan “Building the capabilities of young researchers”.

The conference, which lasts for two consecutive days, is structured around four main themes: Medical, Basic Science, Engineering Sciences, Applied Biosciences, and the best research will be presented.

My sincere thanks and appreciation to my colleagues in the organizing committee of the conference, and my wishes to graduate students for a distinguished scientific conference to realize our aspirations in distinguished applied scientific research beneficial to our society and our beloved Egypt.



Under Auspices of :



Prof. Ayman Ashour
Minister of Higher Education and
Scientific Research



Prof. Dr. Gamal Sosa
President of Benha University



Prof. Dr. Nasser El-Gizawy
Vice President for Post Graduate Studies and
Research of Benha University
(Conference President)



Prof. Dr. Hesham Rashid
(Conference Coordinator)



Prof. Dr. Aly Abd-Elmaboud Aly
(Conference Secretary General)



Prof. Dr. Mohamed H. Refaat
(Associate Editor Benha Journal of
Applied Sciences)



Conference Committees :

Scientific Committee

Name	Position
Prof. Nasser El-Gizawy	Vice President for Post Graduate Studies and Research of Benha University. (President of the Conference)
Prof. Hesham Rashid	Vice Dean for Post Graduate Studies and Research, Faculty of Medicine. (Conference Coordinator)
Prof. Aly Abd-Elmaboud Aly	Vice Dean for Post Graduate Studies and Research, Faculty of Science. (Secretary General of Conference)
Prof. Mohamed H. Refaat	Vice Dean for Post Graduate Studies and Research, Faculty of Agriculture at Moshtohor. (Associate Editor Benha Journal of Applied Sciences)
Prof. Hanaa Abd El- Gawad	Vice Dean for Post Graduate Studies and Research, Faculty of Nursing.
Prof. Ali A. El- Sagheer	Vice Dean for Post Graduate Studies and Research, Faculty of Engineering at Shoubra.
Prof. Ayman Samir Fraid	Vice Dean for Post Graduate Studies and Research, Faculty of Veterinary Medicine.
Prof. Mohamed Taha Abd El-Fatah	Vice Dean for Post Graduate Studies and Research, Faculty of Computer and Artificial Intelligence.



Organizing Committee

Name	Position
Prof. Dr. Gamal Sosa	President of Benha University
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CEO of Benha University Biotechnology Incubator

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A. Prof. Mohamed Bassouny
Director of Laboratory & Scientific Equipment Unit,
Benha University

**Importance of National Bank for Scientific
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Scientific Sessions

Topics of Health & Clinical Science I (Medicine)

1. Orthopedic Surgery

BJAS-2302-1059

1. Comparative Study Between the Results of All Arthroscopic and Arthroscopic Assisted Mini Open Repair of Rotator Cuff Tears

Mohammad Metwaly Abd Elsalam Slem, Hossam Abd Elnaby Albegawy,
Alsayed Mahmoud Bayoumy

Orthopaedic Surgery, Faculty of Medicine, Benha University

Abstract :

Among the elderly and athletic, rotator cuff tears are a frequent injury. This randomized study was carried out to assess the functional and clinical results of arthroscopic assisted mini-open and arthroscopic rotator cuff repair in a comparative case series of patients followed for at least 6 months. At the time of surgical intervention, a total of 40 patients with large sized full thickness rotator cuff tears were randomized to either arthroscopic assisted mini-open (Group I) or arthroscopic (Group II) rotator cuff surgery. The clinical outcomes were assessed using the UCLA score from the University of California, Los Angeles. All patients completed at least 6 months of follow up. Patients with Mini-open operation had a mean age of 56.05 ± 8.22 years old and 49.05 ± 6.61 years old for all arthroscopic operation. There was no discernible difference between the two groups, however the UCLA score had improved significantly in both studied groups postoperatively.

Keywords: Rotator cuff tear _ Arthroscopy _ Open surgery.

BJAS-2302-1090

2. Criteria of Patient Selection in High Tibial Osteotomy in Treatment of Medial Compartemental OA Knee

Bahaa Abdelmageed Barakat, Adel hassan Eladawy, Abdelsalam Abdel Aleem ahmed, Abdelsamie Mohamed Halawa

Orthopedic Surgery Department, Faculty of Medicine, Benha University

Abstract :

Background: Osteoarthritis (OA) is among the world's leading disability causes. According to epidemiological research, there are approximately 43 million afflicted individuals in the U.S alone and approximately 15 percent of the global community. That research purposed to perform a systematic literature review regarding high tibial osteotomy (HTO) as an effective way for management of medial compartmental OA knee and criteria of patient selection for good surgical results of HTO. **Methods:** This systematic review was conducted utilizing SCOPUS, PubMed, Cochrane Library and Web of Science electronic databases. Authors performed and revised search techniques to increase their sensitivity. Search method comprised various phrases and synonyms for osteoarthritis and knee joint in conjunction with high tibial osteotomy, indications, arthroplasty, and life quality, functional capacity, or physical exercise. **Results:** Twelve papers enrolled in this study from 2013- 2018 with 6943 patients underwent high tibial osteotomies, 83% of the studies were retrospective and 17% were prospective. There were 1687 male patients and 1408 female patients among the 3958 patients admitted in 7 articles that described the allocation of gender in their investigations. The percentage of male to female patients was 42.6% to 35.5%, correspondingly. In these investigations, patients average age who received high tibial osteotomies was 49.4 years. The follow up duration of patients was estimated as 3.6 years. **Conclusions:** Literature demonstrates that instability is not a true contraindication for HTO, regardless of whether or not the operation is graded, provided it is well managed. When this recommendation was followed and the procedure's limitations were considered, HTO had favourable results, with a mean 5-year and 10-year survival rate of 89.3 percent (range: 75-98.7 percent) and 77.6 percent (range: 51-97.7 percent), correspondingly.

Keywords: Medial Compartemental; High Tibial Osteotomy; Osteoarthritis Knee.

BJAS-2302-1094

3. Humeral lengthening: Systematic Review and Meta Analysis

**Ahmed Mahmoud Mohamed Gaballah, Gamal Ahmed Hosny,
Hossam El Sayed Farag, Samir Mohamed Monib**

Orthopedic Surgery Department, Faculty of Medicine, Banha University

Abstract:

Background: The humerus lengthening was mostly regarded an aesthetic procedure. Recent study indicates, however, that the objectives of bilateral humeral lengthening in achondroplasia are not just cosmetic, but also to restore proportions between the upper and lower limbs, extend reach, and enhance the capacity to perform perineal personal hygiene. This study's objective was to conduct a comprehensive evaluation and analysis of the outcomes of humeral lengthening. **Methods:** During this systematic review and meta-analysis preparation, we adhered to the PRISMA statement criteria and followed the Cochrane handbook for systematic reviews of interventions. We searched Google Scholar, EKB, PubMed on 20-28 March 2022 and updated the search on 24 April 2022 using appropriate keywords. **Results:** We identified eight studies discussing humeral lengthening including a total number of 158 humeri in 129 patients. The age range of patients across the studies ranged between 6.5 and 20 years. The male gender was common and ranging from 33% to 78%. The humeral lengthening was conducted among 158 humeri among them 34 in the right side. The mean length achieved was 7.7 cm among the included eight studies ranging from 5.1 cm to 9 cm. Pooled analysis of the involved trials showed significant association between length pre and post humeral lengthening (OR = -6.08; 95% CI: [-6.79, -5.38]; $P = <0.00001$). The pooled studies were not heterogenous ($I^2 = 0\%$, $P < 0.46$). **Conclusions:** The lengthening of the humerus was regarded mostly as a cosmetic procedure. Using a variety of external fixators and intramedullary (IM) nails, the humerus was extended by distraction osteogenesis. There is a statistically significant link between length before and after humeral lengthening, although neither range of motion nor functional score are affected.

Keywords: Humeral; Lengthening; Fixators, Intramedullary.

BJAS-2302-1098

4. Comparative Study Between Bouquet Technique and Transverse Wires in Management of Unstable Metacarpal Fractures

Ayman goda, Eslam Abdelshafi Tabl, Wael kandel

Orthopedic Department, Faculty of Medicine, Benha University

Abstract :

Background: Frequent hand trauma is accompanied by many metacarpal and phalangeal fractures. Metacarpal fractures represent 18 to 44% of all hand fractures. About 88 percent of all metacarpal fractures involve metacarpals other than the thumb, with the fifth finger being the most commonly afflicted. The majority of metacarpal fractures occur in active and working populations, particularly adolescents and young adults, and are often caused by a direct blow, crush, or missile injury **Methods:** This prospective study was carried out in Benha university hospital on 20 patients with unstable 2nd to 5th metacarpal fractures: 10 fixed by intramedullary k-wires (Bouquet osteosynthesis), 10 fixed with transverse wiring. **Conclusion:** Transverse wires are versatile, easily accessible, affordable, and surgeon-friendly compared to the bouquet method. They provide a suitable range of motion, enough grip strength, and a functionally favorable result overall. We urge more prospective clinical trials to give a strong guideline for selecting an appropriate surgical method for the fixation of a metacarpal fracture and evaluating the functional outcomes.

Keywords: bouquet technique, transverse wires , metacarpal fractures.

BJAS-2303-1124

5. Management of Intertrochanteric Fractures with External Fixation

Hassan Mahmoud Attia, Gamal Ahmed Hosny, Hesham Ali Ibrahim

Orthopedic Surgery Department, Faculty of Medicine, Benha University

Abstract :

Background: Internal fixation of intertrochanteric fractures in older patients with anesthesia or surgical concerns or in patients with an open fracture has a high complication risk; thus, external fixation should be examined as a semiconservative method to reduce operating time and complications. **Objective:** This study aimed to examine the efficacy of external fixators in treating intertrochanteric fractures in terms of union, functional outcome, and comorbidities. **Patients and methods:** twenty patients with intertrochanteric fracture with a wide range of ages and different physical conditions were treated by Ilizarov external fixator. **Results:** All patients were clinically and radiologically examined for at least six months. There were 15 patients with excellent and good (satisfactory) outcomes, 2 patients with acceptable results, and 3 patients with bad (unsatisfactory) results. Radiological union and fixator removal occurred between 8 and 20 weeks, with a mean of 13.4 weeks. Illness of the pin tract developed in all patients, with one patient developing a very severe infection. Four individuals had a varus malalignment, and one patient had a valgus deformity. Two individuals experienced temporary knee stiffness. **Conclusion:** External fixation of intertrochanteric fractures and open fractures in older, high-risk patients has been proved to be a dependable, successful, and safe therapeutic option. It involves little operating risk, minimal blood loss, a brief hospital stay, early mobility, and a low rate of morbidity and death.

Keywords: Intertrochanteric, Fractures, External, Fixation.

BJAS-2303-1125

6. Trabecular Metal Augments for Reconstruction of Acetabular Bone Defects in Revision Total Hip Replacement; Early Radiological and Clinical Outcomes

Husam Mohamed Hassan Mohamed El Axir,

**Mohamed Gamal Eldin Alashhab, Ahmed Shawkat Rizk,
Ayman Gamil Sorial, Emad Sanad Hussein**

Orthopaedic Surgery Department, Faculty of medicine, Benha University

Abstract :

Background: The amount of total hip arthroplasty (THA) surgeries conducted yearly is on the rise, and this trend is also noticeable in revision hip procedures. However, reconstructing acetabular defects during revision THA can be difficult. Successful revision surgery requires achieving press-fit of the implant, bridging bony defects, and restoring the center of rotation of the hip. Various approaches have been implemented to attain these objectives. **Aim:** to evaluate early functional and radiological outcomes in patients undergoing revision THA with acetabular defects using trabecular metal augments for reconstruction of the acetabulum. **Patients and methods** : A prospective cohort study was conducted in Benha university hospital including twenty patients undergoing revision THA with acetabular defects that necessitate reconstruction between April 2019 and December 2022 in using trabecular metal augment. **Results:** The average age of the patients examined was 59 years old. The majority of the patients were found to have a Paprosky type 2B defect (45%) according to classification. Out of the total patients, 55% (11 patients) had excellent results as per the Oxford Hip Score, 40% (8 patients) showed good results, and only 5% (1 patient) showed fair results. The average time of postoperative follow-up was 16 months. **Conclusion:** porous metal augments are considered a valuable method in the management of acetabular defect due to its modularity and the ability to reconstruct different types of defects with no fear of bone resorption.

Keywords: trabecular metal augment; acetabular defects ; Paprosky classification.

7. Subscapularis Tear Repair Arthroscopic vs Open Surgery

Aly Aly Ibrahim Attia, Hassan Hussin Ahmed, Hossam Eldin Elbegawy

Orthopedic Surgery Department, Faculty of Medicine, Benha University

Abstract :

Background: The largest rotator cuff tendon, the subscapularis, rotates the glenohumeral joint internally. This study's objective was to compare the arthroscopic versus the open technique outcomes in subscapularis tear repair. **Methods:** This prospective study comprised 30 patients who had a subscapularis tear and needed either arthroscopic or open surgery for repair. The study was done in Benha university hospitals and Ahrar teaching hospital from November 2020 to February 2023. Patients were split into 2 groups: Arthroscopic group: 15 were treated by arthroscopic surgery. Open surgery group: 15 were treated with open surgery. **Results:** The arthroscopic group had a higher percentage of combined tears and affected the right side more often, while the open surgery group had a higher percentage of isolated tears and affected the left side more often. The arthroscopic group had more postoperative pain, but fewer complications than the open surgery group. Preoperative and postoperative clinical assessments showed substantial changes among groups of the study concerning the constant score, UCLA score, and results of belly press test. The arthroscopic group had more positive results in belly press tests and lift off after operation. The two groups had similar outcomes in terms of post-surgical complications and duration of follow up. **Conclusions:** In terms of motion range and functional results, arthroscopic treatment may be preferable to open repair. While there are still rare cases when open repair surgery makes sense, particularly when arthroscopic options are restricted.

Keywords: Subscapularis Tear Repair; Arthroscopic; Open Surgery.

8. Associations of Neutrophil/Lymphocyte Ratio with Disease Activity Indices in Patients with Ankylosing Spondylitis

Hanaa Mosbeh Abo El-Soud, Ali Ibrahim Fouda, Ahmed Yousef Alshambaky, Rasha Mohamed Fawzy, Mayada Khalil

Rheumatology, Rehabilitation & Physical Medicine Department,
Faculty of Medicine, Benha University

Abstract :

Background: Axial spondyloarthritis (axSpA) is a painful, inflammatory condition of the spine that usually manifests in young individuals with chronic back pain (less than 45 years of age). It may also be accompanied by extra-articular or periarticular (enthesitis, dactylitis) symptoms (uveitis, psoriasis, inflammatory bowel disease). AxSpA encompasses both ankylosing spondylitis (AS) with radiographic evidence of sacroiliitis and axSpA without radiographic evidence of sacroiliitis.

Objective: to assess neutrophil/lymphocyte ratio (NLR) among AS patients and to evaluate its relation to disease activity. **Methodology:** The present investigation included thirty AS patients and thirty healthy controls. Disease Bath Ankylosing Spondylitis Disease Activity indicators were utilized to assess the disease activity of AS (BASDAI). Analyses were conducted on the relationship between NLR and disease activity. **Results:** There was a significant positive correlation between NLR and Duration of the disease ($r=0.421$, $P=0.020$), ESR ($r=0.433$, $P=0.014$), CRP ($r=0.700$, $P<0.001$), BASDAI ($r=0.433$, $P=0.017$). There was an insignificant correlation between NLR and age. NLR had increased considerably among AS patients compared to controls (P -value <0.05). NLR can significantly predict AS disease activity (P -value <0.001 , at cut off value ≥ 2.03 with 90% sensitivity, 88.89 % specificity, 94.7% PPV and 80% NPV). **Conclusion:** In conjunction with acute phase reactants, NLR might be a valuable marker for indicating inflammation.

Keywords: A.S, BASDAI, NLR.

BJAS-2303-1135

9. Ultrasonographic Assessment of Lower Limb Enthesopathy in Systemic Lupus Erythromatosis Patients

Rehab Mohammed Rabee Gabal, Mounir Serag El Din El Hanafi,
Refaat Mostafa EL Tanawy, Noha Hosni Ibrahim

Rheumatology&Rehabilitation Department, Faculty of Medicine, Benha University

Abstract :

Patients with systemic lupus erythematosus often have musculoskeletal complications (SLE). While synovial tissue has long been thought to be the primary site of inflammation in lupus, entheses have not previously been considered potential disease targets. In order to evaluate enthesitis in people with systemic lupus and arthritis, researchers at the Medical College of Wisconsin examined the entheses included in the Madrid ultrasonographic enthesitis index (MASEI) in a case control study including 50 SLE patients and 30 healthy controls. The patellar tendon, rather than the quadriceps, was more often affected by the clinical enthesitis that was observed in 97 of 100 knees (97 percent) of patients. There were 58 abnormalities detected by US in asymptomatic right and left knees and 103 abnormalities detected via US in knees experiencing pain, edoema, and restricted motion. MSUS has high diagnostic specificity for enthesitis in SLE patients. SLE patients often have enthesitis, as seen by clinical observation and ultrasonography.

Keywords : SLE -MSUS Enthesitis.

BJAS-2304-1145

10. Correlation between Anti-DNA/N-methyl-D-aspartate Receptor 2 antibodies and Systemic Lupus Erythematosus

Menna Mohamad Ibrahim Bhnasawy, Abd-El Wahab Shams El-Din El-Brashy, Rasha Mohamad Fawzy, Noha Hosni Ibrahim, Rasha Abdel-Hameed El Sayed

Rheumatology&Rehabilitation Department, Faculty of Medicine, Benha University

Abstract :

Background: Self-reactive antibodies are a characteristic of systemic lupus erythematosus (SLE). These autoantibodies may attack any organ or tissue in the body causing organ failure. One class of anti-DNA antibodies, known as anti-DNA/N-methyl-D-aspartate receptor 2 (anti-DNA/NR2) antibodies, also interacts with the NR2 subunit (anti-NR2) of N-methyl-D-aspartate receptors (NMDARs). Research suggests that anti-NMDAR antibodies contribute to the pathophysiology of SLE-related emotional and cognitive dysfunction. **Objective:** The goal of this study was to evaluate the prevalence and severity of systemic lupus erythematosus in individuals with anti-DNA/N-methyl-D-aspartate receptor 2 (NR2) antibodies. **Methodology:** 60 SLE patients and 30 healthy controls had serum samples taken. Anti-NR2 antibodies in the serum were tested using an ELISA kit. **Results:** The average serum anti-NR2 antibody level in SLE patients was 34.10 ng/ml, whereas the level in healthy controls was only 11.60 ng/ml with a statistically significant difference ($P < 0.001$). Serum anti-NR2 can significantly discriminate between SLE patients and healthy subjects, with diagnostic ability at best cut off value 13.26 ng/ml with high sensitivity and specificity. **Conclusion:** Serum anti-NR2 can be used as a new biomarker for SLE.

Keywords: anti-DNA/N-methyl-D-aspartate receptor 2 antibodies, Systemic lupus erythematosus, Biomarker.

2. Dermatology, Venereology and Andrology

BJAS-2302-1054

1. Serum Endocan and Carotid Intima-Media Thickness Evaluation in Male Androgenetic Alopecia Patients

**Gehad Alsayed Afify, Neveen Emad Sorour, Mohamed Saber Hussein,
Enas Sebaey Ahmad, Mohamed Said Darwish**

¹Department of Dermatology, Venereology & Andrology, ²Department of Clinical&Chemical Pathology, ³Department of Cardiology, Faculty of Medicine, Benha University, Egypt.

Abstract :

Background and aim of the work: Patients with androgenetic alopecia (AGA) was correlated with higher prevalence of insulin resistance, hypertension, coronary artery disease, obesity, atherosclerosis and aberrant serum lipid profile. Endocan is a possible immunoinflammatory indicator associated with cardiovascular disease. Patients with AGA appear to be at an increased risk of developing CAD, therefore, clinical evaluation of cases with AGA of grade II is recommended the carotid intima-media thickness (CIMT) is a powerful indicator of future cerebrovascular and cardiovascular disorders. This research intended to examine serum level of endocan and CIMT in male AGA patients. Patients and Methods: that research conducted in Dermatology Department, Benha University Hospital, on sixty AGA participants with 20Y old age and gender-matched individuals during the period from January 2021 to August 2021. Results: endocan level was considerably lower in control compared to AGA group, but no critical change was seen among groups concerning CIMT. Conclusion: Serum endocan was considerably lower in control compared to AGA group, but concerning CIMT, a non-critical change was seen among groups.

Keywords : CIMT, Serum Endocan, Male Androgenetic Alopecia.

BJAS-2302-1064

2. Assessment of Response to Intralesional Vitamin D in Treatment of Warts

Rana R. Sanad¹, Eman M. K. Sanad¹, Ahmed M. Hamed¹,
Amany K. Shahat²

¹ Department of Dermatology, Venereology and Andrology,

² Department of Microbiology and Immunology,

Faculty of Medicine, Benha University.

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Abstract :

The human papillomavirus (HPV) causes the common, transient cutaneous condition known as warts. It is infectious, disfiguring, and occasionally benignly koebnerizes. Immunotherapy, which stimulates the immune system, is the most frequent treatment for warts. Even though vitamin D impacts cell proliferation and differentiation, the vitamin D injections effect on wart therapy is unknown. Vitamin D increases the synthesis of antimicrobial peptides, including lymphopiotin and cathelicidin, by upregulating VDRs on immune cells and keratinocytes of the skin. A deficiency in vitamin D may increase the HPV infection incidence by raising the host's susceptibility to HPV penetration and decreasing its capacity to remove the virus.

Keywords: warts, treatment, immunotherapy, vitamin D.

BJAS-2302-1092

3. Influence of the Fractional CO₂ Laser on Immunohistochemical Expression of Smooth Muscle actin in Keloid and Hypertrophic Scars

Shimaa Abd El Hamed Mohamed Mrekab¹, Ihab Younis Abdallah¹, Reham Abd Elmohsen Abdelsamie¹, Rana M. ElSaid Abou ElFetouh Abdalla²

¹ Department of Dermatology & Andrology, ² Department of Pathology,
Faculty of Medicine, Benha University

Abstract :

Background: Wound healing is a set of elaborate and complex mechanisms including period of oscillation of inflammation, granulation tissue production, and tissue remodeling, which culminates in the restoration of tissue structural stability and injury. That study purposed to evaluate clinical and histopathological changes of keloid and hypertrophic scars before and after CO₂ laser treatment. Methods: That interventional research was carried out on individuals with keloids and hypertrophic scars attending the Out-patient Clinic of Dermatology in Hospital of Benha University. Participants were exposed to historical analysis, Local Dermatological inspection, Tissue biopsy, Treatment course by fractional CO₂ laser, follow up after treatment. Results: A statistically critical decrease in size of the lesion when comparing among pretreatment and post-treatment ($p < 0.05$). Vancouver scale score results were considerably higher pre-treatment than post-treatment ($P < 0.05$). Conclusion: From the previous results we can conclude that Fractional CO₂ laser is a viable therapy option for keloid and hypertrophic scars since it reduces clinical signs such as colour, thickness, and pruritus in addition to improvement at the cellular level.

Keywords: Fractional CO₂ Laser; Immunohistochemical Expression; Keloid; Hypertrophic Scars.

4. Impact of Covid 19 Pandemic on Female Sexual Desire

**Alaa Mohamed Abdo¹, Samy Hanafy Mohamed¹,
Asmaa Said Mohamed¹, Samah Ezzat Ibrahim²**

¹ Department of Dermatology, Venerology and Andrology, ² Department of Psychiatry, Faculty of Medicine, Benha University

Abstract :

Background: Corona Virus disease 2019 (COVID-19) epidemiology and quarantine have an influence on female sexual health and function. Sexual intercourse frequency decreases. The pandemic is connected with a decline in sexual life quality, sexual desire and intercourse frequency decrease during closure. In addition, the pandemic has an effect on the decline in desire for conception, the decline in female contraception, and the rise in menstruation diseases. In addition, the COVID19 pandemic leads to an enormous rise in stress and anxiety levels, as well as a considerable reduction in interpersonal contact. Typically, major disasters result in widespread sexual dysfunction and diminished sexual life pleasure. This may indicate that when an issue affects everyone similarly and may have future ramifications, its influence on sexual elements is relatively unfavorable. The Female Sexual Function Index (FSFI) is one of the most widely utilized scales for assessing sex life and is regarded the "gold standard." It evaluates several facets of sexuality. Performing the questionnaire twice provides the opportunity to examine the influence of certain circumstances on sexual life. Due to medical advancements, it is vital to identify sexual dysfunctions in women, who, if left untreated, are connected with a greater risk of melancholy, anxiety, and worse life quality. This article aimed to explain COVID-19 Pandemic impact on Egyptian female sexual life.

Keywords: Covid 19; Female Sexual Desire; Impact.

BJAS-2303-1116

5. Serum Clusterin Level in Patients with Pityriasis Versicolour

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Benha University

Abstract :

Background: Pityriasis versicolor is a moderate, persistent, superficial skin illness caused by *Malassezia furfur* and/or other *Malassezia* species. The lesions are characterised by the development of distinct, serpentine, hyper- or hypopigmented macules, often on the chest, upper back, arms, and belly. Clusterin [apolipoprotein J] is a heterodimeric, disulfide-linked, 75-80kDa protein related with apoptosis and cellular debris clearance. Clusterin is encoded on human chromosome 8 by the CLU gene. CLU is a molecular chaperone that helps secreted proteins fold. It has a function in a variety of clinical ailments associated with oxidative stress, such as inflammatory disorders, neurological diseases, and malignant situations. This paper intended to determine the serum concentration of CLU in Pityriasis versicolor patients and its potential significance in the disease's development.

Keywords: Serum Clusterin; Pityriasis Versicolour.

6. Assessment of Serum Apelin Level in Patients with Erectile Dysfunction

**Areeg Moawad Abd Elaziz Elnoby¹, Osama Hussein Alkady¹,
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¹ Department of Dermatology, Venereology & Andrology, ² Department of Clinical and Chemical Pathology, Faculty of Medicine, Benha University

Abstract :

Objectives: Analyzing the relationship between serum Apelin-13 levels and erectile dysfunction severity **Background:** Both hypercholesterolemic and hyperglycemic mice, two well-known vasculogenic ED models, have recently been revealed to have an elevated Apelin system, and intracavernosal acute injection of Apelin has been proven to restore erectile functioning in both animals (19). **Data Sources:** We did this by searching and examining the Medline databases (Pub Med and Medscape) and looking for studies that looked at the probable link between serum Apelin-13 and erectile function and its connection to severity of erectile dysfunction up to 2020. **Study Selection:** The quality of each study was evaluated separately before being accepted. If they met any of the following criteria, we considered them for inclusion: 1. It's written in English and published. 2. Appearing in publications with a strict peer-review process. Third, explain how the level of serum Apelin-13 may be linked to erectile function and how this may affect the severity of erectile dysfunction. **Data Extraction:** Studies were not included if they did not meet the inclusion criteria. Ethical permission, eligibility criteria, controls, information, and well-defined evaluation measures were all factors in determining the study's quality. Our concerned research results were captured by independently abstracting data utilising a data collecting form from each qualifying study.. **Conclusions:** Serum Apelin -13 levels are lower in individuals with erectile dysfunction, and this drop is associated with elevated triglyceride and body-mass index levels .

Key words: Erectile Dysfunction, Serum Apelin-13.

BJAS-2303-1123

7. Assessment of Serum Bilirubin and Uric Acid Antioxidant Levels in Acne Patients

Safwa Abdallah Gouda, Ghada Mohamed Abdel Khalik, Asmaa Mohamed Alrefaie

Department of Dermatology, Venereology & Andrology,
Faculty of Medicine, Benha University

Abstract :

Background: UA levels and serum bilirubin have a role in pathogenesis of acne. Data Sources: Using Medline resources (Pub Med and Medscape) and information about the significance of serum bilirubin and UA levels in acne that is up to date through 2023. Study Selection: For inclusion, each study underwent an independent evaluation. They were involved if they matched the following requirements: 1. Published in English language. 2. Published in peer-reviewed journals. 3. Discuss serum bilirubin and UA levels role in pathogenesis of acne. Data Extraction: Studies were disqualified if they didn't meet the criteria for inclusion. Evaluation of the quality of the study involved determining whether it had received ethical approval, eligibility criteria that were clear, proper controls, adequate information, and established assessment strategies. Employing a data collection form, data from each eligible study were independently abstracted to gather details on the study results we were interested in. Conclusions: We can safely conclude that bilirubin and UA may have a possible function in acne vulgaris (AV) pathogenesis. **Objectives:** Assessing the serum bilirubin and uric acid (UA) levels as oxidative stress markers in acne patients.

Keywords: Acne vulgaris, Bilirubin, Uric acid.

BJAS-2303-1133

8. Clinical and Trichoscopic Evaluation of Male Androgenetic Alopecia Patients

**Shaimaa Abd Ellatif Mohamed Bedewy, Eman Moustafa Kamel Sanad,
Doaa Mohammed Al-Habbak**

Department of Dermatology, Venereology & Andrology,
Faculty of Medicine, Benha University

Abstract :

Background: Androgenic alopecia (AGA) is a prevalent hair condition characterised by progressive pattern hair loss in the frontotemporal and vertex areas of the scalp in both men and women. Androgenic alopecia worsens with age and lowers patients' body image satisfaction. Androgenic alopecia affects at least fifty percent of men by the age of fifty, and up to seventy percent of all men in their later years. **Aim of the Work:** To assess the effectiveness and safety of therapies for androgenetic alopecia in males. **Patients and Methods:** his randomized interventional study included 40 male patients complaining of AGA. They were selected from those attending the Outpatient Clinic of the Dermatology & Andrology Department, Benha University Hospital science 2019 to 2023. This research comprised 40 male patients with AGA complaints. They were picked from Benha University Hospital's Dermatology and Andrology Department Outpatient Clinic patients. **Results:** It was discovered that medications for the management of male androgenetic alopecia are both safe and effective. **Conclusion:** For the treatment of male androgenetic alopecia, it was discovered that therapies are both safe and effective.

Keywords: Treatments ; Androgenetic ; Alopecia

BJAS-2303-1148

9. Evaluation of Serum Level of Neprilysin in Patients with Acne Vulgaris

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¹ Dermatology, Venereology and Andrology, ² Microbiology and Immunology,
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Abstract :

Background: Acne vulgaris (AV) is a sebaceous gland condition caused by a wide variety of underlying causes. A major contributor to this illness is the body's abnormal and too abundant production of sebum. Overactive sebaceous glands or increased sensitivity to normal levels of androgen hormones are the root causes of sebum production. Neurocutaneous nerves express the newly discovered zinc-dependent neuropeptide NEP (NEP). Multiple unpleasant stimuli, both internal and external, have been linked to this expression. Allergy contact dermatitis, atopic dermatitis, psoriasis, and atopic vitiligo (AV) all have a common pathogenetic factor: neuropeptides. **Aim:** to determine how serum NEP levels in acne vulgaris patients relate to overall health and well-being (HRQoL). **Subjects and Methods:** Fifty patients with acne vulgaris and fifty controls of similar age and gender participated in this case-control study. Between February 2022 and July 2022, they were scouted from the outpatient clinic of the Dermatology, Venereology, and Andrology Department at Benha University Hospitals. The blood NEP concentration was measured using a commercially available, research-use only Enzyme-Linked Immunosorbent Assay (ELISA) kit for human neprilysin. All patients' HRQoL was evaluated with the use of the dermatological life quality index (DLQI). **Results:** There was no statistically significant difference in age, sex, or body mass index between the patients and the control group. Acne vulgaris patients had a substantially elevated serum NEP level compared to controls. Patients with mild acne had lower serum NEP levels than those with severe acne. Using ROC analysis, we find that NEP may be a predictor of acne vulgaris. There was a link between NEP and HRQoL. **Conclusion:** Patients with AV had considerably greater serum NEP levels compared to controls. Acne vulgaris patients may experience a decline in quality of life due to this increase. To verify these findings, larger-scale investigations are required.

Keywords: Neprilysin;DLQI;Acne Vulgaris

3. Radiology; Critical Care Medicine; Biochemistry; Clinical and Chemical Pathology.

BJAS-2302-1071

1. Role of Interventional Radiology in Hemodialysis for Pediatric Age Groups with Difficult Access (Tunneled Permanent Venous Catheter with Difficult Access)

Amr Amin Abd Allah Abd El Fattah, Hesham Mohamed Farouk,
Mahmoud Abd El Aziz Ghalab

Radiology Department, Faculty of Medicine, Benha University

Abstract :

Background: Hemodialysis in infants and young children is an effective and safe form of renal replacement therapy but problems with vascular access limit its use in the long-term. **That study aimed to** highlight the role of the interventional radiologist to get venous access for pediatric age group patients presented with chronic renal impairment notably cases with difficult venous access using permanent tunneled venous dialysis catheter (PermiCath). **Methods:** This observational study was carried out on 20 patients presented to Radiology Department at Kafr Elsheikh Main University hospital. Participants were exposed to full clinical history, previously available examinations, and radiological examination. **Results:** 9 cases had done AV shunt (45 %) and 11 cases were AV shunt free (55%). 15 cases were PD-free (75 %) and 5 cases were dialyzed by PD (25%). The total number of catheters inserted was 36 catheters and the number of catheters that were removed was 16 catheters. 11 catheters were removed due to mal / nonfunctioning (30.6%), 8 catheters were thrombosed (22.2 %), 2 catheters were partially slipped (5.6%), 1 catheter was removed due to fibrin sheath (2.8%). 3 catheters were removed due to catheter-related blood born infection (8.3%), and no catheters were removed from exit site infection. 2 catheters were removed electively after AV shunt working (5.6%). **Conclusion:** The placement of tunneled cuffed central venous catheters for hemodialysis by interventional radiologists is safe and effective with very low complication rates in children, especially with difficult venous access.

Keywords: Radiology; Hemodialysis; Pediatric; Difficult Access; Tunneled Permanent; Venous Catheter.

2. Value of Ultrasound Elastography in Combined with Mammography in Evaluation of Indeterminate Breast Lesions

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Abstract :

Breast cancer is both the most commonly identified life-threatening cancer in women and the top cause of cancer mortality in women worldwide. The best line of protection against breast cancer is still an early diagnosis. Examples of screening methods are as follows: Self-examination, the clinical inspection, and mammography altogether with Ultra-sonography. Aim of the work: The aim of the work is to evaluate the role of breast elastography combined with mammography as a diagnostic method in indeterminate breast lesions. Patient and methods: This prospective cohort study was conducted upon 50 female patients with breast mass/masses at Radiology Department of Tanta Cancer Center referred from Surgery Department & early detection unit. The present study demonstrated in correlation with other studies that breast ultrasound elastography is sensitive in diagnosis of indeterminate breast lesions however not reliable without other modalities. Results: The overall sensitivity of breast elastography in diagnosis of indeterminate breast lesions was about 66%. Conclusion: Elastography substantially improves the US capability in differentiating benign from malignant breast lesions, thus reducing the number of breast biopsies in benign nodule. Elastography is a useful complementary tool for undetermined breast lesions but cannot avoid fine needle aspiration or core biopsy if ultrasound features are clearly suspicious.

Keywords: Breast Lesions, Elasto-Graphy, Ultrasound.

3. Ultrasound Guided Drainage and Aspiration of Intra-Abdominal Fluid Collections

Samar Mahfouz Gomaa, Hesham Mohamed Farouk,

Ahmed Saied Mohamed Ali

Radiodiagnosis Department, Faculty of Medicine, Benha University

Abstract :

Background: Currently, ultrasound-guided percutaneous biopsies, abdominal abscesses evacuation, cyst and fluid aspiration are standard diagnostic techniques. This research purposed to clarify role of ultrasound guided evacuation and intra-abdominal fluid collections aspiration.

Methods: This cohort prospective research was conducted on 50 intra-abdominal fluid collections individuals who had ultrasound-guided percutaneous evacuation. The collections were discovered and targeted by ultrasound or guided percutaneous needle aspiration, and a safe evacuation path that protected key anatomic structures was devised. All participants underwent exhaustive patient history, clinical and general examinations and lab investigations and radio diagnostic imaging.

Results: Regarding the location of collection, it was intraperitoneal in 33(66%) patients and retroperitoneal in 17(34%). The nature of collection was liver abscess in 25(50%) patients, peripancreatic collection in 10 (20%) patients, GB perforation in 8 (16%) patients and appendicular abscess in 7 (14%) patients. Nature of fluid was unilocular in 26 (52%) patients and multilocular in 24 (48%) patients. The volume drainage ranged from 476-775 ml with a mean of 622.74 ± 84.39 ml. Catheter was the treatment option in 29 (58%) patients and Puncture was the treatment option in 21(42%) patients. The hospital stay was with a median of 2.5 days.

Conclusions: US-guided evacuation is an effective treatment for intra-abdominal collections and has become the therapeutic option for a broad range of intra-abdominal collections. It is advantageous to avoid or postpone a big operation.

Keywords: Ultrasound-Guided, Drainage, Aspiration, Intra-Abdominal Fluid Collections.

BJAS-2303-1128

4. Role of Abdominal Ultrasonography In Evaluation Of Small and Large Bowel Lesions

**Mahmoud Abdel-Latif Behery, Ahmed Faried Youssef,
Hamada Mohamed Tolba Khater**

Diagnostic Radiology Department, Faculty of Medicine, Benha University

Abstract :

Background: The use of ultrasonography (US) in evaluating gut disease has been underappreciated in most diagnostic imaging departments. Traditionally, the role of US in bowel assessment has been limited to diagnosis of appendicitis and examination of the rectum, anal sphincters, and surrounding tissues with endorectal or endovaginal imaging. The aim of this study was to assess the role of abdominal ultrasonography in imaging of small and large bowel lesions. **Methods:** This cross-sectional study was carried out in Benha University Hospital and Al-Ahrar teaching Hospital. 100 patients known to have intestinal diseases or with intestinal complaint. The duration of the study ranged from 6-12 months. **Results:** Final diagnosis of the different patients is illustrated in table (3). Appendicular lesions were the most common findings in 31 patients (31%); acute appendicitis in 20 patients (20%), appendicular abscess in 7 patients (7%) and mucocoele of appendix in 4 patient (4%). Tumours were detected in 26 patients (26%) of patients; colonic carcinoma in 26 patients (26%). The Ultra-Sound findings of appendicitis were dilated tubular structure in 31 patients, non-compressible in 31 patients, aperistaltic structure in 31 patients, seen in the right iliac fossa region in 31 patients, adjacent free fluid in 21 patients, appendicular mass in 7 and Fecolith in 3 patient, no detected gangrenous appendicitis. The Ultra-Sound findings of the neoplastic lesions were abnormal internal vascularity in 20 patients, circumferential wall thickening seen in 17 patients, lumen narrowing seen in 17 patients only and polypoidal mass seen in 26 patients. **Conclusion:** Ultra-Sound is applicable in emergency diagnosis in cases of acute abdomen. Ultra-Sound has high diagnostic accuracy as confirmed with operative finding and / or histopathology and follow up. Ultra-Sound cause no health problems and can be repeated if medically indicated.

Keywords: Abdominal Ultrasonography – Small and Large Bowel Lesions.

5. Continuous Nerve Block

Dina Ahmed Mohamed El-Sabagh, Reda Khalil, Mohamed Adel Khashaba

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Abstract :

Background: CPNB known as "perineural infusion of local anesthetic" is the catheter placement next to a peripheral nerve, preceded by local anesthetic administration through catheter, which gives anesthesia/analgesia for many days or even months. CPNBs may be delivered in a hospital setting, but mobile infusion using mobile, lightweight pumps is also a possibility. The most prevalent use of this technique is postoperative pain control. Treating intractable hiccups is considered one of the included other indications; initiating vasodilation to raise blood supply and sympathectomy after catastrophic vascularity, digit transfer/replantation, or limb salvage; relieving Raynaud's disease vasospasm; and treating chronic pain and peripheral embolism, such as complex regional pain syndrome, phantom limb pain, trigeminal neuralgia, and cancer-induced pain. Perineural infusion may give analgesia after trauma while transit to a distant medical facility or while awaiting surgical repair. Catheter installation may be achieved utilizing various different methods, involving nerve stimulation, ultrasound guiding, paresthesia induction, fluoroscopic imaging, and basic tactile sensations ("facial click"). This article provides a review of the existing literature on continuous peripheral nerve blocks supported by evidence.

Keywords: Continuous; Nerve Block; Peripheral; Infusion.

6. Management of Severe Perioperative Bleeding

**Weam Abd Elaal Elsayed Elkady, Mohamed Hamed Abd Elrahman,
Reda Khalil.**

Anesthesia and Intensive Care Department, Faculty of Medicine, Benha University

Abstract :

Perioperative bleeding continues to be a serious problem during and after surgery, leading to increased mortality and morbidity. Non-vascular sources of haemostatic perioperative bleeding often result from a bleeding problem that has gone undiscovered, from the specifics of the surgery itself, or acquired coagulation abnormalities due to haemorrhage, hemodilution, or the administration of haemostatic factors. Allogeneic blood product delivery, pharmacologic medicines, and the growing use of pure or recombinant haemostatic factors are all considered conventional treatment techniques in the management of bleeding patients. Trauma and sophisticated surgical operations, such as heart surgery and liver transplantation, cause a cascade of haemostatic alterations in the perioperative period. Tranexamic acid, desmopressin, fibrinogen, and prothrombin complex concentrates are some of the newer methods used for both the prevention and treatment of perioperative bleeding. More in-depth evaluation of targeted treatment for haemostasis is now possible because to point-of-care testing using thromboelastography, rotational thromboelastometry, and platelet function tests. Better management, less use of allogeneic blood products, and fewer transfusion-related complications may be achieved by multimodal, and strategic approaches. The goal of this effort is to alleviate the difficulty of controlling bleeding in surgical patients. Research priorities include, but are not limited to, preventing hypotension, sustaining appropriate tissue perfusion and oxygenation, and preventing bleeding.

Keywords: Extreme Blood Loss During Surgery; Low Blood Pressure; Hemostasis.

BJAS-2302-1097

7. A Prospective Cohort Study Evaluated the Significance of the Neutrophil-Lymphocyte Count Ratio in Determining If A Patient Being Admitted To An Intensive Care Unit Has Sepsis.

**Ahmed Abd Ellatif Elsaid Ahmed Khaled, Essam Fotouh Makram,
Mariam Mohammed Salah Eldeen**

Anesthesia and Intensive Care Department, Faculty of Medicine, Benha University

Abstract :

Background: Severe infection can become worse by the clinical illness known as sepsis. In critically ill patients, the neutrophil-lymphocyte count ratio (NLCR) assesses inflammation and stress in a straightforward, quick, and affordable manner. Objectives: To test determine neutrophil-lymphocyte count ratio's importance in sepsis diagnosis comparing to other indicators like WBC count, CRP, and neutrophil count. Patients and methods: In 100 patients participated in this prospective cohort study included. Of them, 50 were ICU patients who had sepsis and 50 were not. All patients had thorough history taking, thorough clinical examinations, and standard laboratory tests. confirmation of infection, radiological investigations and inflammatory markers. By dividing the ratio of neutrophils to lymphocytes, or the lymphocyte count divided by the neutrophil count was determined. Results: There were statistically significant variations in SOFA and CRP across the examined groups. In terms of NLCR, Between the groups that were assessed, there were statistically significant differences, with greater mean values seen in the group with sepsis. There was statistically significant data as well relation regarding mortality with significant higher deaths in sepsis group than no sepsis. We showed the validity of NLCR at cutoff value of > 6.65 , as sensitivity was 64% and specificity was 60%. But at a cutoff value of > 10.7 to predict mortality, sensitivity was 68.2% and specificity was 67.9%. positive correlations between were statistically significant between CRP and temperature and between NLCR and SOFA. Conclusion: However, the delicateness and precision of the association between higher NLCR and greater mortality in adult septic patients were constrained.

KeyWords: sepsis, neutrophil lymphocyte count ratio.

BJAS-2304-1144

8. Correlation between Left Ventricular Speckle Tracking and Coronary Angiography in Patients with Suspected Coronary Artery Disease

**Ahmed Maher Mohamed Omar¹, Osama Sanad Arafa²,
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¹ Msc Critical Care Medicine, ^{2,4} Department of Cardiology, ³ Department of Cardiothoracic Surgery, Faculty of Medicine, Benha University

Abstract :

Background: To evaluate the efficacy of speckle tracking echocardiography (STE) in detecting the existence, degree, and intensity of coronary artery affection in patients with suspected coronary artery disease (CAD). **This study aimed to** Investigate the ability of STE to identify the existence, size, and intensity of coronary artery affection in individuals with a suspected diagnosis of CAD. **Methods:** This cross-sectional study enrolled 200 candidates with suspected COD. Patients underwent STE and coronary angiography. Global longitudinal peak systolic strain (GLPSS) was measured and linked with coronary angiography findings for every subject. **Results:** ROC analysis was done for GLPSS in predicting single-vessel affection. It revealed a significant AUC of 0.713, with confidence interval of 95 percent ranging from 0.555-0.871 ($P = 0.013$). The best cutoff was ≤ -18 , at which specificity and sensitivity were 53.8 and 83 percent. ROC analysis was done for GLPSS in predicting multi-vessel affection. It revealed a significant AUC of 0.908 ($P < 0.001$). The best cutoff was ≤ -11 , at which specificity and sensitivity were 89.6 percent and 87.7 percent. **Conclusion:** Two-dimensional speckle tracking echocardiography predicts the existence, size, and degree of CAD with high sensitivity and specificity.

Keywords: Global Longitudinal Strain; CAD; stable angina; Coronary angiography.

BJAS-2304-1147

9. The Expression Pattern of miR-34a-5p in Primary knee osteoarthritis Patients

Doaa Shaban Mahmoud Mohamed, Naglaa Ibrahim Azab, Rasha Mohamed Fawzy, Mayada Khalil, Lina Abdelhady Mohammed, Shaymaa Mohamed Abd El Rahman

Medical Biochemistry & Molecular Biology Department, Faculty of Medicine, Benha University

Abstract :

Background: MicroRNAs serve a crucial role in the post-transcriptional control of gene expression, as well as in development and cellular activities. Differential miRNA expression patterns between osteoarthritis (OA) patients and healthy persons demonstrate the significance of miRNAs in the pathogenesis of OA. miR-34a-5p affects biological activities such as p53-induced cell cycle arrest, apoptosis, and senescence, and its expression is markedly elevated in the plasma of patients with advanced primary knee osteoarthritis (KOA) **Methods:** The expression of miR-34a-5p in human plasma (n = 60) will be divided into two categories: **Group (A):** Forty primary KOA patients who met the American College of Rheumatology (ACR) criteria .**Group (B):** Twenty healthy-appearing individuals. They were of the same age and gender as OA patients. was measured using quantitative real-time PCR. **Results:** Our research demonstrated that miR-34a-5p expression is considerably elevated in the plasma of patients.**Conclusion:** Our results offer extensive evidence of the function of miR-34a-5p in the pathogenesis and joint destruction of primary KOA.

Keywords: Osteoarthritis, miR-34a-5p, Quantitative Real Time PCR.

BJAS-2303-1120

10. Study the Association between Dyslipidemia and CCL2 in Patients Undergoing Hemodialysis

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Abstract :

Background: Chronic kidney disease (CKD) is becoming a major public health problem worldwide, with a high prevalence in developing countries. C-C Motif Chemokine Ligand 2 (CCL2), also known as monocyte chemotactic protein-1 (MCP-1) can be produced by a variety of cells, reaching increased levels in dyslipidemic patients. Aim: The present study was to identify the relation between dyslipidemia and CCL2 in patients undergoing hemodialysis. Subjects and methods: This case-control study was conducted on 80 subjects: 60 hemodialyzed patients who were recruited from the Nephrology Department and Renal Dialysis Unit at Benha University Hospital and 20 apparently healthy controls. All participants were subjected to full history taking, complete clinical examination, and laboratory investigations including lipid profile and CCL2 were measured. The association between CCL2 levels and dyslipidemia was investigated using linear regression, adjusted for classic and non-classical CVD risk factors. Results: A significant association was observed between CCL2 levels and dyslipidemia ($P < 0.001$), even after adjustment for possible confounding variables, such as age and gender ($P = 0.001$), as well as predictor after adjustment with body mass index, diabetes mellitus, HD time, and urea ($P < 0.001$). Conclusion: Our study suggests that CCL2 levels may contribute to the development of cardiovascular disease in HD patients by promoting dyslipidemia. Through a better understanding of this pathogenesis, new therapeutic targets could be discovered to reduce cardiovascular complications for these patients.

Keywords: Dyslipidemia; CCL2; Chronic kidney disease; Hemodialysis.

4. Obstetrics ; Gynecology; Cardiology; Hepatology ; Gastroenterology and Neurological diseases.

BJAS-2302-1058

1. Cardiac magnetic resonance (CMR) versus Echo-doppler Cardio Graphic Parameters for Myocardial recovery Detection after Chronic total Occlusion (CTO) Revascularization

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Department of Cardiology, Faculty of Medicine, Benha University

Abstract :

Background and aim: Despite significant advances in the treatment of coronary artery disease (CAD), the condition remains the primary cause of morbidity and death globally. 15–20% of individuals with coronary artery disease (CAD) have chronic complete occlusion (CTO) of a coronary artery. The purpose of this study was to examine the usefulness of cardiac MR, TTE, Doppler Echocardiography, and speckle tracking echocardiography in identifying recovery in patients with CTO who benefited from revascularization following successful revascularization. Patients and Methods: Thirty patients with ischemic heart disease and coronary angiography-confirmed chronic complete blockage were included in this prospective, single-center observational research. Patients were exposed to a comprehensive history, current medicines, the angioplasty operation, echocardiography, two-dimensional echocardiography, myocardial strain evaluation, cardiovascular magnetic resonance imaging, and follow-up four months following PCI. Only GLS demonstrated a statistically significant improvement in myocardial recovery performance. Conclusion: CTO-PCI may successfully enhance LV function, as concluded.

Keywords: Cardiac magnetic resonance, Echo-Doppler, cardiograph, myocardial recovery, chronic complete occlusion.

BJAS-2302-1091

2. Assessment of Coronary Atherosclerotic Plaque Characteristics by Computed Tomographic Angiography in Smokers Compared to Non-smokers.

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Abstract :

Background: Smoking and passive smoking have been identified as variable risk factors for AMI and CAD, smoking plays a major role in premature coronary atherosclerosis and in accelerating atherosclerosis by increasing the oxidation of LDL and damaging coronary endothelial vasodilation. The purpose of this study is to assess coronary atherosclerotic plaque characteristics including (site, extent, nature and length) by computed tomographic angiography in smokers compared to non-smokers.. **Methods:** This cross sectional, single center study was conducted at at kobri El koba military hospital during the period from December 2019 to July 2021 This study included 200 male patients with suspected CAD scheduled for coronary CT angiography. They were divided into two equal groups. The first group included smokers and the second group included non-smokers. **Results:** The smokers' group had a significantly higher prevalence of CAD compared to non-smokers' group. There was no significant statistical difference between the two groups regarding number of affected vessel if it was single or multiple vessels. Middle RCA, Left Main artery, Proximal LAD and Mid LAD were more affected among smokers). Comparison of the nature of obstruction showed that the rate of obstruction was higher among smokers, as well calcific plaques were the most prevalent type among smokers, however it was more common in non-smokers. **Conclusion:** Compared to the non-smokers, smokers had a considerably greater prevalence of CAD in our research. The severity of coronary blockage was greater in smokers than in nonsmokers. CCTA is a potential non-invasive method that may detect coronary artery stenosis and rule out coronary artery disease, as well as evaluate the features of atherosclerotic plaques.

Keywords: coronary atherosclerosis, computed tomography, smoking.

3. Coronaviruses and Their Associated Diseases

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Faculty of Medicine, Benha University

Abstract :

Coronaviruses (CoVs) are positive-sense RNA viruses with envelopes infecting animals and triggering human diseases ranging from mild to severe. A new coronavirus known as SARS-CoV-2 (severe acute respiratory syndrome coronavirus) first appeared in China at the end of 2019 and caused an outbreak of viral pneumonia posing an extraordinary threat to public health. Study is aimed to discuss the basic biology, the epidemiology, pathogenesis, manifestations, diagnosis and treatment of coronavirus stressing on the ongoing pandemic of COVID -19. Data collected in this review is based on earlier literatures, reviews, and studies that were chosen from reputable medical journals and websites (PubMed, Science Direct, and other electronic databases) all material that is accessible online between 2019 and 2022. The search terms involved: coronavirus, COVID-19, SARS-CoV, vaccines. Each study was evaluated separately to determine its inclusion. If coronaviruses and covid-19 not within national research program, they were omitted. As a result, 203 publications were found in the initial search, and 11 items that did not fulfil the inclusion requirements were removed. A total of 192 studies were involved: 34% of 192 papers about coronaviruses structure, classifications, pathogenesis, mode of transmission, characters, and covid-19 epidemic, 15.6% on the clinical features and complications of the virus, 22.3% on management and 13% about COVID 19 vaccines. As a conclusion: coronaviruses cause respiratory, gastrointestinal, diseases in animals. Only 7 coronaviruses cause diseases in humans. The ongoing COVID-19 epidemic serves as a reminder of how quickly new infections develop, spread and cause severe public health crises.

Keywords: coronaviruses, COVID-19, emerging coronavirus, vaccines.

BJAS-2303-1108

4. Ultrasonographic Measurement of Placental Thickness and Its Correlation with Estimated Fetal Weight

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Ahmed Abdel HameedShedid, Tamer Mahmoud Assar

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Abstract :

Background: Placenta is a materno-fetal organ, and its size is indicative of the fetus health and growth. Placental thickness (PT) is an additional ultrasonographic metric commonly used to evaluate the placenta. The objective of this study was to assess the relationship between PT (at 32- and 36-weeks of gestation) and to estimate the fetal weight. Methods: This observational study was performed at the Department of Obstetrics and Gynecology Benha University Hospital and Shebeen Elkoom insurance hospital over a period from July 2020 to November 2021. Results: There was a significant positive correlation between PT at 32 weeks and Apgar score at 1st and 5th min. Also, there was a significant positive correlation between PT at 36 weeks and Apgar score at 1st and 5th min. There was a significant positive correlation between PT at 32 weeks, PT 36 at weeks and femur length (FL), abdominal circumference (AC), biparietal diameter (BPD), head circumference (HC), estimated fetal weight (EFW) and amniotic fluid index (AFI). Conclusion: The evaluation of fetal weight (a vital element of prenatal treatment), relies heavily on ultrasonography(US). PT measured at the umbilical cord insertion point is a reliable sonographic indication for fetal weight evaluation, due to their linear correlation .

Keywords: Ultrasonography; Placental Thickness; Estimated Fetal Weight.

BJAS-2303-1109

5. Role of Fetal Mid- Thigh Soft Tissue Thickness in Prediction of Fetal weight and Comparing It with Other Ultrasound Methods

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Abstract :

Background: Researchers are paying a lot of attention to measurement of mid-thigh soft-tissue thickness (MTSTT), one of the soft tissue parameters. This study's objective was to evaluate MTSTT measurement accuracy and femur length, in calculating the anticipated foetal birth weight. **Methods:** This is cross-sectional research that enrolled 130 singleton pregnant women revealed for planned delivery at term (among 37 and 40 weeks) either by induction of labor and vaginal delivery or elective cesarean section within 48 hours. Each patient underwent a thorough clinical assessment, thorough history collection, and an ultrasound investigation. **Results:** When assessing the Hadlock formula in estimating fetal weight compared to actual fetal weight, the sensitivity was 82.8%, specificity was 88.1% with area under the curve 87.1% as fetal weight was equal or lower than 3500 gm. A significant positive moderate correlation among weight by Hadlock formula and actual fetal weight. While a critical positive strong correlation was present between actual fetal weight and weight by Scioscia's formula (P-value <0.001). When assessing the Hadlock formula in estimating fetal weight compared to actual fetal weight, the sensitivity was 82.8%, specificity was 88.1% with area under the curve 87.1% as fetal weight was equal or lower than 3500 gm. When assessing the Scioscia's formula in estimating fetal weight compared to actual fetal weight, the sensitivity was 72.4%, specificity was 86.1% with area under the curve 84.1% as fetal weight was equal or lower than 3500 gm. **Conclusions:** We concluded that MTSTT, a linear measurement, can be added to normal biometric parameters to enhance foetal weight prediction by ultrasound at term prior to delivery because it is simple, straight forward, and easy to obtain.

Keywords: MTSTT, Fetal Birth Weight; Ultrasound.

BJAS-2303-1119

6. Doppler Ultrasound in Prediction and Follow up of Copper 380 IUCD Induced Excessive Menstrual Bleeding

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Mahmoud Abdalla Abdel Fattah, Hatem Elgendy Abdelsalam

Obstetrics and Gynecology Dept., Faculty of Medicine, Benha University

Abstract :

Objectives: This research aimed to evaluate Doppler Ultrasound value in prediction and follow up of copper 380 intrauterine contraceptive device (IUCD) induced excessive menstrual bleeding. **Patients and methods:** This was a prospective study performed on a total of 120 cases seeking 380 IUCD insertion. All the cases were subjected to 1) Full history taking, 2) General examination, 3) pelvic examination, 4) Abdominal exam, 5) Speculum examination to detect and exclude any bleeding local cause as erosion and polyp, 6) Menstrual history, 7) Obstetric history and 8) Doppler US. **Results:** Uterine artery resistance index (RI) and pulsatility index (PI) before and after IUD were negatively correlated with IUCD induced bleeding ($P < 0.001$). The RI and PI of sub-endometrium prior and following IUD were negatively correlated with the IUCD induced bleeding ($P < 0.001$) while visual field index (VFI) and vascularization index (VI) before and after IUD were positively correlated with the IUCD induced bleeding ($P < 0.001$). Also, endometrium flow index (FI), VFI and VI before and after IUD were positively correlated with the IUCD induced bleeding ($P < 0.001$). The uterine artery RI and PI prior and following IUD were negatively correlated with the IUCD induced bleeding ($P < 0.001$). **Conclusions:** Medical professionals should give women unbiased information on the potential variations in bleeding they may face if there is no extremely successful medication for excessive bleeding in the first few months following copper IUD placement.

Keywords: Doppler Ultrasound; Copper 380; IUCD-Induced Excessive Menstrual Bleeding.

BJAS-2302-1087

7. A Study of the Psychiatric Profile of Females undergoing Minor Cosmetic Interventions

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Abstract :

Background : Cosmetic interventions have been popular in the last 10 years. The results of these interventions can be affected by the prevalence of psychiatric disorders among those candidates. Which may fake the need for the intervention especially disorders which affect body image.

Aim of the study: to detect psychiatric disorders in those females who had cosmetic procedures and to investigate the relationship between it and degree of satisfaction of results of the intervention and even avoid more unnecessary non satisfying interventios .

Methods and Results: In this comparative cross-sectional study, eighty three females (83 females) that undergone minor cosmetic procedures attending to dermatology department and outpatient clinic and eighty three age matched control subjects were recruited. Psychiatric assessment was assessed according to The Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders IV (I , II) (DSM IV) and The Body Dysmorphic Disorder Questionnaire-Dermatology Version (BDDQ-DV). The presence of psychiatric disorders was examined by SCID I , II and the degree of satisfaction of self image and the result of the procedure was assessed by semi structured questionnaire and BDDQ score. Present, Past or Family history of any trials to have cosmetic procedures was evaluated by a Semi-structured Interview. In the current study psychiatric disorders was higher in females who had cosmetic procedures when compared to controls.

Conclusion: Higher degree of psychiatric disorders in females undergone or seeking minor cosmetic procedures lead to many unnecessary procedures due to lack of self esteem or poor satisfaction of body image.

Keywords: Cosmetic procedures, psychiatric disorders, Body dysmorphic disorder questionnaire.



Scientific Sessions

Topics of Health & Clinical Science II (Nursing)

5. Obstetrics ; Gynecology and Pediatric Nursing

BJAS-2301-1031

1. Effect of Benson's Relaxation Technique on Postoperative Pain and Quality of Sleeping among Women Undergoing Hysterectomy

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Abstract :

Background: Benson's relaxation technique is one of the systematic techniques that could be utilized to relive postoperative pain and improve sleep quality. It is an important component of nursing care for hysterectomized women. Aim: the study aimed to evaluate effect of Benson's relaxation technique on postoperative pain and quality of sleeping among women undergoing hysterectomy. Design: Quasi-experimental study design (two groups study & control) was utilized. Setting: The study was conducted at Obstetrics and Gynecological department in Benha University hospital. Sample: A purposive sample for women undergoing hysterectomy at a period of 6 months. Tools: Three tools were used. I: An interviewing questionnaire sheet (personal characteristics, current surgical data) II: visual analog scale and III: The Groningen Sleep Quality Scale. Results: There was a significant improvement in pain severity and sleep quality among women in study group compared with those in the control group, after application of Benson's relaxation technique. Moreover, there was highly negative statistical correlation between total pain severity and total sleep quality scores of studied group at pre and post-intervention phase. Conclusion: The application of Benson's relaxation technique was effective in reducing severity of post-operative pain and enhancing quality of sleeping among women undergoing hysterectomy. Recommendation: It was recommended that Benson's relaxation intervention should be offered as a part of standard nursing care for women undergoing hysterectomy in hospitals.

Keywords: Benson's relaxation technique, hysterectomy, postoperative pain, quality of sleeping.

2. Early Suckling and Post-Partum Bleeding

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Abstract :

Background: Nipple stimulation caused by the baby's suckling releases oxytocin and consequent uterine contractions. Consequently, uterine contractions can reduce duration of the third stage of labor and postpartum bleeding. Aim of this study to evaluate effect of early suckling on postpartum bleeding .Design: A quasi experimental research design was utilized. Setting: The study was conducted at labor unit of Obstetrics and Gynecology department in Benha University Hospital. Sampling: A purposive sample of (100) women's (50) in the control group were given routine care and (50) women in the study group, women encouraged to initiate early suckling immediately after delivery. Three tools were used I): A structured interviewing questionnaire II): Observation record on parturient women during stages of labor III): Breastfeeding assessment tool. Results: The findings of the study revealed that early suckling & increased frequency of breast-feeding could decrease the amount of blood loss during the stages of labor. There were highly statistically significant differences in duration of third stage of labor in women of study group than those women in the control group. Reveals that, majority of the study group satisfactions about the outcome of early suckling. Conclusion: women who practice early suckling after birth would be expected to experience short duration of third stage of labor and affected positively in reducing postpartum bleeding. Recommendation Developing awareness program for parturient women to enhance their knowledge to benefit early suckling.

KeyWords: Early suckling, Postpartum Bleeding.

3. Effect of Instructional Package on Maternity Nurses' Knowledge and Practices regarding Assessment of Fetal Well-being

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Abstract :

Background: Assessment of fetal well-being during pregnancy is a critical tool for ensuring optimal neonatal outcomes. Nurses have a major role for assessment of fetal wellbeing and improving the physical and psychosocial maternal condition. Aim of the study: Was to evaluate the effect of instructional package on maternity nurses' knowledge and practices regarding assessment of fetal wellbeing. Study design: A quasi-experimental design was utilized. Setting: The current study was conducted at Obstetrics and Gynecological department affiliated to Benha University Hospital. Sample: A convenient sample included 50 maternity nurses. Tools of data collection: Two tools were used for data collection and included: Tool (I) Part I Self-administered questionnaire to assess maternity nurses' demographic data. Part II Assessment of maternity nurses' knowledge regarding assessment of fetal wellbeing. Tool (II) Observational checklist was used to assess maternity nurses' practices regarding assessment of fetal wellbeing. Results: The result of present study revealed that there was a highly statistically significant difference in relation to total nurses' knowledge and practices about assessment of fetal well-being pre, post and at follow up phases of instructional package implementation. Moreover, there was a positive statistically significant correlation between total knowledge and total practice scores pre, post and at follow up phases of instructional package implementation. Conclusion: The instructional package had a positive effect on improving knowledge and practices of maternity nurses regarding assessment of fetal wellbeing. Recommendations: Develop periodic in-service training programs for nurses to enhance their practical skills regarding assessment of fetal wellbeing.

KeyWords: Fetal Well-being, Instructional Package, Knowledge, Maternity Nurses, Practices.

BJAS-2302-1072

4. Pregnant Women's Awareness and Attitude towards Importance of Iodine Intake during Pregnancy at Benha University Hospital

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Abstract :

Background: Adequate iodine intake during pregnancy is vital for the mother and the fetus, iodine is an essential micronutrient that is required for thyroid hormone production. This study aimed to assess pregnant women's awareness and attitude towards importance of iodine intake during pregnancy at Benha university hospital. Design: A descriptive Study design was utilized to conduct this study. Setting: The study was conducted at obstetrics and gynecological outpatient clinic affiliated to Benha University Hospital. Sample: A convenient sample used in the study; it included 143 pregnant women. Size of sample: all pregnant women attended at antenatal clinic for three months at time of data collection. Tools: The tools of data collection were: I .A structured interviewing questionnaire sheet and II. Likert scale to assess pregnant women's attitude toward importance of iodine intake during Pregnancy. Results: less than three quarters of the studied pregnant women had inadequate awareness about importance of iodine intake. Most of the studied pregnant women had negative attitude about importance of iodine intake. There was highly statistically significance relation between total awareness score and total attitude score of the studied pregnant women with educational level as well as occupation. Moreover, there was a highly Positive statistically significant correlation between total awareness and total attitude among studied pregnant women regarding importance of iodine intake. Conclusion: Most of the studied pregnant women had poor awareness and negative attitude regarding iodine intake during pregnancy. Also, there was a highly Positive statistically significant correlation between total awareness and total attitude among studied pregnant women regarding importance of iodine intake during pregnancy. Recommendation: Implementation of guidelines for modification of lifestyle of pregnant women regarding dietary iodine intake .

Keywords : Attitude, Awareness, Importance of Iodine intake, Pregnant Women.

BJAS-2302-1078

5. Effect of Deep Breathing and Kegel Exercises on Urinary Incontinence among Elderly Women

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Abstract

Background Urinary incontinence considers the most common and distressing health problem among the aging population especially elder women, associated with a profound negative impact on their life. Aim of the study: The study was conducted to evaluate effect of deep breathing and kegel exercises on urinary incontinence among elderly women. Design: A quasi-experimental study design was utilized in this study (one group pre and post-test). Sample: A purposive sample was selected and this study was performed on 100 Menopausal women diagnosed with stress urinary incontinence. Setting: gynecological and urological outpatient clinics at Beni-Suef university hospital. Tools: Data was collected using 1) a structure interviewing questionnaire schedule, 2) The International Consultation on Incontinence Modular Questionnaire, 3) Pelvic floor muscles exercises checklist. Results: There were highly statistical significant differences in the frequency of urinary incontinence (p-value 0.000), and the amount of urine loss (p-value 0.004) among the studied women before and after practicing deep breathing and Kegel exercises. Also, there were as highly statistical significant improvement in physical condition and psychological condition of the studied women (p-value 0.000) after intervention than pre-intervention. Conclusion: Deep breathing and kegel exercise had positive effect on physical and psychological conditions as well as performing daily activities without stress, feeling of confidence and satisfied from sexual relation. Recommendations: Developing awareness program regarding importance and benefits of practicing deep breathing and kegel exercises to reduce stress urinary incontinence symptoms among elderly women .

Key words: Deep breathing, Elderly women, Kegel exercise, Stress urinary incontinence.

BJAS-2302-1082

6. Nursing Intervention for Pregnancy Induced Hypertension Hospitalized and Home Group

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Abstract :

Background, Pregnancy induced hypertension is a form of high blood pressure after 20 weeks gestation without significant proteinuria and one of the leading causes of mortality and morbidity among pregnant women. Aim: This study aims to evaluate effectiveness of implementing nursing intervention for pregnancy induced hypertension among hospitalized and home group. Design: A quasi-experimental design was utilized. Setting: The study was conducted at outpatient clinic and obstetrics and gynecological department at Benha University Hospital. Sampling: A purposive sample of (120) pregnant women. Tools of data collection: four tools were used, tool I): A structured interviewing questionnaire tool II): Knowledge assessment sheet tool III) Practices report assessment sheet. Tool (IV): Modified Women's Satisfaction Sheet: Results there was statistical significant difference improvement on total knowledge and total practices score among pregnant women in hospital group compared to home group at post intervention and follow up phases. The present study reveals that pregnant women in hospitalized group more satisfied than those in home group post intervention and follow up phases. Moreover, there was a highly statistical significant positive correlation between total knowledge score and total practices score regarding pregnancy induced hypertension in both groups at pre intervention, post intervention and follow up phases. Conclusion: Nursing intervention program regarding pregnancy induced hypertension in hospitalized pregnant women group would improve total knowledge and total practices score than home group post intervention and follow up phases. Furthermore, pregnant women in hospitalized group showed more satisfaction from the nursing intervention program than the home group Recommendation: Developing awareness program regarding early detection, referral and management of pregnancy induced hypertension for pregnant women at antenatal clinics.

Keywords: Hospital and home group , Nursing intervention ,Pregnancy induced hypertension.

BJAS-2302-1083

7. Effect of On -Job Training Program on Nurses' Compliance and Satisfaction with Infection Control Measures at Obstetric Operating Room

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Abstract :

Background: Infection control is the most important field of concern at obstetric operating room. Infection control is defined as measures practiced by nurses to reduce the risks of transmission of infectious agents to women. **Aim of the study:** The study was to investigate effect of on- job training program on nurses' compliance and satisfaction with infection control measures at obstetric operating room. **Design:** A quasi- experimental design was utilized to conduct the study. **Setting:** The study was conducted at Obstetrics operating room in Benha university hospital. **Sample:** A Convenient sample All nurses at obstetric operating room will be included: (70) nurses. **Tools:** The tools of data collection were structured-interviewing questionnaire, An observation checklist and Nurses' satisfaction after on-job training program. **Results:** (reveals that there was a highly statistically significant improvement in wearing protective clothing, surgical hand washing, gloving, gowning, masking, handling sharp instruments and cleaning and sterilization 91.4%, 92.9%, 97.1, 88.6%, 91.4, 92.9 and 88.6% in post on job training program compared to 28.6%, 31.4%, 54.3%, 28.6%, 40.0%, 31.4% and 28.6% at pre on-job training program respectively and reveals that all of the studied nurses (100%) were satisfied to the on-job training program. **Conclusion:** there was highly statistical significant improvement in nurses' total knowledge, compliance and satisfaction post on-job training program compared to pre-Recommendations: Updating nurses' knowledge and compliance through continuing on-job training programs.

Keywords: infection control measures, on-job training program, nurses' compliance, satisfaction.

BJAS-2302-1085

8.Effect of an Instructional Guideline regarding Physical Measures on Primary Dysmenorrhea among Nursing Students

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Abstract :

Background: Physical measures are from one primary goal of alternative medicines and commonly cited as a probable remedy for primary dysmenorrhea. **Aim:** of the present study was to evaluate the effect of an instructional guideline regarding physical measures on primary dysmenorrhea among nursing students. **Design:** A quasi experimental design pre/post-test one group was utilized. **Setting:** This study conducted at technical nursing institution in Benha University Hospital. **Sample:** A purposive sample included 218 nursing students. **Tools:** Four tools were used for data collection: 1) An interviewing questionnaire to collect data related to sample and menstrual characteristics, 2) Verbal multidimensional scoring system, 3) Visual Analogue scale and 4) Likert scale. **Results:** the present study revealed that, there was a highly statistical significant difference between symptoms of primary dysmenorrhea at pre and post- intervention and there was a highly statistically significant relation between studied sample satisfaction and pain intensity of dysmenorrhea at post intervention phase ($P\text{-value} \leq 0.05$). **Conclusion:** Dysmenorrheal symptoms and pain were alleviated after implementation of an instructional guideline regarding physical measures than before implementation. **Recommendation:** Physical measures as dysmenorrheal treatment are needed to develop and dissemination of illustrated guideline to control and relief of dysmenorrheal syndrome among nursing students and women in other ages.

Keywords: Physical measures, Primary dysmenorrhea, Nursing students.

BJAS-2302-1088

9. Pregnant Women`s knowledge and Attitude Regarding Obstetric Fistula

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Abstract :

Background: obstetric fistula is a major public health concern among thousands of women with in developing country and has the most devastating effects on physical, social, and economic levels. Also, obstetric fistula is a preventable condition that health care workers play a key role in its prevention. The aim of this study was to assess knowledge and attitude of pregnant women regarding obstetric fistula. Design: A descriptive study design was utilized. Setting: The study was conducted at an outpatient clinic of obstetrics and gynecological affiliated to the Benha University Hospital. Sampling: A convenient sample of 288 pregnant women. Tools: Three tools were utilized for collecting data: Tool I: A structured interviewing questionnaire. Tool II: Pregnant women's Knowledge Assessment Sheet regarding obstetric fistula. Tool III: Pregnant women's Attitude assessment sheet regarding obstetric fistula. Results: showed that, three quarters of the studied pregnant women had in adequate level of total knowledge regarding obstetric fistula. Also, less than two thirds of them had negative attitude regarding obstetric fistula. Moreover, there was a statistically significant relation between pregnant women's total knowledge score as well as total attitude score and their general characteristic. Conclusion: the study concluded that, there was highly statistically significant positive correlation between total knowledge of the studied pregnant women and their total attitude regarding obstetric fistula. Recommendations: There is a need to provide educational program during the pregnancy for improving knowledge and attitude of pregnant women regarding obstetric fistula .

Keywords: Attitude, Knowledge, pregnant women, Obstetric fistula.

BJAS-2302-1089

10. Effect of Instructional Guidelines on Knowledge and Attitudes of Perimenopausal Women Regarding Endometrial Cancer

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Abstract :

Background: Perimenopause means around menopause and refers to the time during which the body makes the natural transition to menopause. Endometrial cancer is the 6th most commonly occurring cancer in women worldwide and the 15th most common cancer overall. **Aim of the research:** To evaluate effect of instructional guidelines on knowledge and attitudes of perimenopausal women regarding endometrial cancer. **Research design:** A quasi-experimental design was utilized to fulfill the aim of this research. **Research setting:** The current research conducted in faculty of nursing and faculty of education, Benha University. **Sample type:** A convenient sample was selected from the above-mentioned research setting. **Sample size:** All administrated women at the Faculty of Nursing (30) and Faculty of Education (55) Benha University > 42 years during the time of data collection, (Total sample size 85). **Tools of data collection:** two main tools were utilized: tool (I) Self administrated questionnaire sheet, it was cover the following parts: Socio-demographic characteristics such as (age, level of education, social status, residence and family income), History of studied women such as (menstrual and obstetric history, birth control history, medical history and surgical history) and assessment women's knowledge regarding endometrial cancer, tool (II) Modified likert scale for menopausal women's attitudes regarding endometrial cancer. **Result:** There was a high statistically significant positive correlation between women's total knowledge and their attitudes regarding endometrial cancer at before and after implementation of instructional guidelines ($p \leq 0.001$). **Conclusion:** Implementation of Instructional guidelines had a positive effect on women's knowledge and attitudes regarding endometrial cancer. **Recommendation:** Conduct a nationwide screening program for women to detect any changes in the reproductive system to prevent endometrial cancer.

Keywords: Attitudes, Endometrial cancer, Instructional guidelines, Knowledge, Perimenopause.

BJAS-2302-1079

11. Effect of Evidence-Based Guidelines on Nurses' Performance Regarding Care of High-Risk Neonates Undergoing Surfactant Replacement Therapy

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Abstract :

Background: The main course of treatment for respiratory distress syndrome includes surfactant replacement therapy (SRT), which prevents alveolar collapse, boosts survival, and lowers respiratory morbidities. Evidence-based nursing guidelines improve neonatal care and bridge the gap between research findings and clinical practice. Aim of the study was to assess the effect of evidence-based guidelines on nurses' performance regarding care of high-risk neonates undergoing SRT. Design: a quasi-experimental research design was utilized to conduct this study. Setting: This study was conducted in Neonatal Intensive Care Unit (NICU) at Benha University Hospital. Sample: A convenient sample of all available nurses (64 nurses) who were responsible for providing care to high-risk neonates and purposive sample of high-risk neonates (30 neonates) who receive SRT and admitted to NICUs. Tools of data collection: Two tools were used: Tool (I): A structured interviewing questionnaire sheet to assess characteristics of the studied subjects and nurses' knowledge regarding care of high-risk neonates undergoing SRT. Tool (II): Observational checklists to assess nurses' practices regarding care of high-risk neonates undergoing SRT. Results: The majority of the studied nurses (84.4%) had satisfactory total level of knowledge in post-implementation of guideline, there was an improvement in total nurses practices post-implementation of guideline compared to pre-implementation. There was a positive correlation between nurses' knowledge and practices of caring high-risk neonates undergoing SRT in pre/post evidence-based guideline implementation. Conclusion: The evidence-based guideline was effective in improving nurses' knowledge and practices regarding care of high-risk neonates undergoing SRT post-implementation of guideline. Additionally, there was a positive correlation between nurses' total knowledge and practices. Recommendation: Enhancing nurses' knowledge and practices regarding care of high-risk neonates undergoing surfactant replacement therapy by encouraging them to attend periodical training courses.

Keywords: Evidence-Based, Guidelines, Nurses' Performance, High-Risk Neonates, Care, Surfactant Replacement Therapy

6. Psychiatric ; Mental Health and Community Health Nursing

BJAS-2301-1039

1. Psychological Problems, Quality of Life and Coping Strategies among Parents of Children with Congenital Heart Diseases

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Abstract :

Background: Congenital Heart Diseases are one of serious disabilities seen among children. CHD are emerging health problems in our country which negatively affect on psychological status of their parents, impair their quality of life and hence their coping strategies. Aim of the study: This study designed to evaluate coping mechanisms, quality of life, and psychological issues among those who have CHD children. Research designs: The study's goals were accomplished using a descriptive correlational design. Research setting: Benha University Hospital's cardiology outpatient clinic in Benha City, Qalyubia Governorate, was the setting for the study. Sample: Parents of 150 children with congenital cardiac problems were selected purposefully from the previously described situation. Tools for gathering data: To collect data, four tools were employed; 1st tool: A sheet of well-structured interviewing questionnaire, 2nd tool: Depression, Anxiety and Stress Scale (DASS), , 3rd tool : Quality of Life Scale and 4th tool: Coping Strategies scale. Results: Results revealed that higher than half of the parents who were evaluated suffer from mild to serious psychological issues (depression, anxiety and stress). Additionally, higher than half of them have low levels of overall coping mechanisms, and less than two-thirds of them have low level of overall quality of life. Conclusion: According to the study's findings, parents who have CHD children are more likely to suffer from mental health concerns such stress, anxiety, and depression, which have a detrimental impact on their quality of life and coping mechanisms. Recommendations: To lessen their psychological issues and improve their quality of life and coping mechanisms, all parents who have children diagnosed with congenital heart diseases should participate in a psycho-educational training program.

Keywords: Psychological Problems, Quality of Life, Coping strategies, Congenital Heart Diseases.

BJAS-2301-1040

2. Psychological Problems and Coping Patterns among Mothers of Children with Thalassemia

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Abstract :

Background: Mothers of children with thalassemia usually experience many psychological problems which negatively affect not only all quality of life domains but also, their coping patterns towards their children illness. **Aim:** study purpose is to evaluate the psychological status issues and coping mechanisms among moms of children diagnosed with thalassemia. **Research design:** This study will be conducted with a descriptive design. **Setting:** The blood transfusion facility at the blood disorders department of Benha Specialized Children Hospital in Qaliubiya Governorate is where the study was carried out. **Sample:** For the aforementioned scenario, 100 mothers of thalassemia children were gathered as a purposeful sample. **Tools:** To collect data, three instruments were employed; 1st tool: A sheet of structured Interviewing Questionnaire, 2nd tool: Scale of Depression, Anxiety and Stress (DASS) and 3rd tool: Scale of Coping patterns. **Results:** showed that higher than half of the moms who were tested with moderate levels of anxiety, stress, and depression. Additionally, higher than half of them displayed poor overall coping strategies. **Conclusion:** According to the findings, among the mothers who were tested, a highly statistically significant positive link is between overall depression, anxiety, and stress. While a highly statistically significant inverse relationship is between the mothers' overall coping strategies and their levels of depression, anxiety, and stress. **Recommendations:** to lessen their psychological issues and improve their coping skills, all moms of children with thalassemia should participate in a psycho-educational training program

Key words: Psychological Problems, Coping patterns, Mothers, children, Thalassemia.

BJAS-2301-1046

3. Psychosocial Status and Quality of Life among Vitiligo Patients

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Abstract :

Vitiligo is a chronic skin disorder that may have a negative impact on patients' self-esteem, body image, social state and quality of life. Aim: The aim of the present study was to assess the relationship between psychosocial status and quality of life among patients with vitiligo. Design: A descriptive correlational research design was used to achieve the aim of this study. Setting: The study was conducted in laser unit at Benha Dermatology Hospital and in phototherapy unit at Benha University Hospital Governorate. Subject: A convenience sample of 100 patients with vitiligo was included from the above settings for conduction of this study. Tools: Five tools used for data collection. Tool I - A structured interviewing questionnaire was used to collect data about socio demographic and clinical characteristics of the studied sample. Tool II - Self-esteem Scale. Tool III - Body image scale, Tool IV - Social problems scale , Tool V - Quality of life scale. Results: More than half of studied sample had low level of self-esteem and quality of life. While more than half of studied sample had moderate negative body image. Also, half of studied sample had moderate level of social problems. Conclusion: There was a highly statistically significant positive correlation between total body image, total social problems and quality of life. While, there was a highly statistically significant negative correlation between total self-esteem of the studied patients and total body image, total social problems and quality of life. Recommendation: Stress management and assertiveness training program should be given to patients with vitiligo to relieve the psychosocial problems and enhance coping patterns.

Keywords : Psychosocial, Quality of life, Vitiligo, patients.

BJAS-2302-1077

4. Effect of Psycho-Educational Program on Activity of Daily Living Among Schizophrenic Patients

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Abstract :

Background: Activity of daily living are basic self-care routine activities that people tend to do every day without needing assistance. Mentally ill people may need long term services to carry out activities of daily living. Aim: the study aims to evaluate the effect of psycho-educational program on activity of daily living among schizophrenic patients. Design: A quasi-experimental design (pre and post-test) will be used. Setting: This study was conducted at in-patient of Psychiatric and Mental Health Hospital in Benha City, Qalubia Governorate, which is affiliated to General Secretariat. Subjects: Convenience sample of 40 chronic hospitalized schizophrenic patients. Tools: Data were collected using tool one: A semi structured interview sheet that, which include two parts;- Part one: Socio-demographic sheet including personal data of the schizophrenic patients, Part two: Clinical data about schizophrenic patients, Tool two: Observational checklist about activities of daily living for schizophrenic hospitalized patients, developed by the researcher. Results: The present study showed that, more than half of the schizophrenic patients were dependent on others in doing their activities of daily living pre the psycho-educational program implementation which decreased to more than one third post the psycho-educational program implementation, there was a highly statistically significant differences found of the schizophrenic patients' total activities of daily living score between pre and post of psycho-educational program implementation. Conclusion: Psycho educational program had a positive effect on activity of daily living among schizophrenic patients. Recommendations: Training program for nurses to help and accomplish the expected patient care outcome. Raise nursing staff awareness about the importance of activities of daily living for schizophrenic patients, through mass media, posters, psychiatric patient videos and illustrated booklet.

Keywords: Psycho-Educational Program, Activity of Daily Living, Schizophrenic Patient.

5. Effect of Expressed Emotion Management Program on Self Control and Social Adjustment among Substance Abusers

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Abstract :

Background: Substance abuse is one of the major health and social problems that seriously impairs people's self-control and social adjustment. The study's goal was to assess the impact of an expressed emotion management programme on self-control and social adjustment in substance abusers. To achieve the study's goal, A quasi-experimental design was employed. The research was conducted at the Addiction Treatment Center and Addiction Clinic at the Psychiatric Mental Health Hospital in Benha City, Qalubia Governorate, which is affiliated with the general secretariat. **Subjects:** For this study, a convenience sample of 40 substance abusers was used. For data collection, three tools were used. To collect data, tool 1 was a structured interview questionnaire. was used to collect information about the studied sample's sociodemographic and clinical characteristics. To assess self-control, the Tool 2- Self Control Scale was used. To assess social adjustment, use Tool 3: Social Adjustment Scale. The study found that there was a significant improvement in self-control and social adjustment among substance abusers after the programme compared to before it, and there was a high significant statistical positive correlation between total self-control and total social adjustment among the studied subjects after programme implementation. **Conclusion:** The expressed emotion management programme had a positive effect on substance abusers' self-control and social adjustment. **Recommendations:** A self-control and social adjustment expressed emotion management programme should be implemented in addiction clinics and treatment centres For those who are addicted to drugs or alcohol. for substance abusers to cover a broader spectrum..

Keywords: Expressed emotion management, Substance abuse, Self-control, Social adjustment.

6. Application of Trans-Theoretical Model on Diet Behavior Modification among Hypertensive Employee in Electrical Company

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Abstract :

Background: A healthy diet is one of the real modifiable factors in controlling high blood pressure. The trans theory model is the best known and applies to a variety of unhealthy behaviors such as: Hypertension, obesity, drug use, and smoking. Aim of the study: was conducted; to evaluate, the effect of application of trans-theoretical model; on diet behavior modification; among hypertensive employee; in electrical Company. Design: A quasi-experimental; design; was used. Setting: The study; was conducted; at Benha Electrical Company; in Benha City, Egypt. Sample: A purposive sample; of 70 hypertensive employee; in electrical company. Study instruments included; two tools ;used for; data collection. First: Structured interview questionnaire; concerned with socio-demographic; data and knowledge; of employees about hypertension, Diet behavior modification and Trans theoretical model (TTM). Second: Trans- theoretical model of behavior changes questionnaire. Results: revealed that, 14.3 %; of studied sample; had good knowledge; pre TTM application; compare to 81.4%; of studied sample had good knowledge post TTM application for Diet behavior Knowledge. And none to 88.6% for TTM Knowledge Furthermore, there were; a highly. Significant; improvement; ($p < 0.000$) in subtotal TTM levels. Post TTM application ' "satisfactory" responses were increased from a range of 28.6% pre TTM application, to 95.7% post TTM application. Besides, there was, high significant; positive correlation; between; total knowledge score and total score; of stages of diet behavior changes ($r = 0.76$, $p < 0.0001$). Conclusion: Application of TTM for behavior modification to control hypertension in hypertensive employees was observed by decreasing blood pressure measurements and increasing employee self-efficacy experiences and behavior modification processes. However, it decreased after TTM application compared with TTM application. Recommendation: provide electrical company employees with web site for health information to improve their knowledge and diet behavior to control chronic diseases as hypertension

Keywords: Trans theoretical model, Hypertension, Diet behavior modification, electrical company.

BJAS-2301-1042

7. Application of an Epidemiological Triangle Model on Prevalent Sexually Transmitted Diseases Among Married Women

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Abstract :

Sexually transmitted diseases are globally recognized as significant health burdens. The aim of this study was to evaluate the application of an epidemiological triangle model on prevalent sexually transmitted diseases among married women. Research design: A quasi experimental design was utilized in this study. Setting: This study was conducted at the Obstetrics& Gynecology Outpatient Clinics in Benha University Hospital and Benha Teaching Hospital in Benha City. The sample: Simple random sample of 25% of all women attended to previously mentioned settings which included 150 women. Tools: A structured interviewing questionnaire which includes fourth parts:- a): demographic characteristics b): Medical history of the studied women's regarding obstetric history and present complain c): knowledge about prevalent sexually transmitted disease (chlamydia, gonorrhea, syphilis and trichomoniasis) according to an epidemiological triangle model d): womens' reported practices for prevalent sexually transmitted disease (chlamydia, gonorrhoea, syphilis and trichomoniasis) according to an epidemiological triangle model. Results: 18.0% of the studied women had good total knowledge pre implementation compared with 72.7% post implementation of epidemiological model, and 31.3% of the studied women had satisfactory total practices pre implementation compared with 81.3% post implementation of epidemiological model. also the result proved that there are no significant correlations between total knowledge scores and total practices scores pre implementation of epidemiological triangle model and there are positive statistically correlations between total knowledge scores and total practices scores post implementation of epidemiological triangle model among the studied women. Conclusion: The epidemiological triangle model succeeded to improve knowledge and practices of the studied women regarding sexually transmitted diseases. Recommendations: Provide continuous educational program to women in Outpatient Obstetrics Clinics to increase knowledge about prevention of sexually transmitted diseases.

Key words: Epidemiological Triangle Model, Prevalent Sexually Transmitted Diseases, Married Women.

BJAS-2301-1048

8. Quality of Life among Diabetic Patients with Lower Limb Prosthesis

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Abstract :

Background: Diabetic foot is a major complications of diabetes mellitus, lead to lower limb amputations. Devices called lower limb prosthesis are designed to replace the place of a lost lower limb. **Aim:** Assess quality of life among diabetic patients with lower limb prosthesis. **Research design:** For this study, a descriptive research design was employed. **Setting:** This study was conducted at Rheumatology Outpatient Clinic at Teaching hospital in Benha City. **Sample:** Purposive sample, all patients with lower limb prosthesis attended to previously mentioned setting, total sample size was 60 patients. **Tools:** Three tools were used, I): An interviewing questionnaire was used to assess; Socio- demographic characteristics of studied patients, medical history and patients' knowledge about diabetes mellitus and prosthesis. II): Quality of life for diabetic patients with lower limb prosthesis. III): Attitude of diabetic patients toward limb prosthesis. **Results:** 41.7 % of patients aged more than 50 years old with mean age 45.63 ± 10.28 years, 53.3 % were male, 56.7% of patients under study had poor overall knowledge level, 40% of them were taking insulin injection and 58.3 % of them had low total quality life. Also 70 % of studied patients had negative total attitude regarding limb prosthesis. **Conclusion:** There were significant positive correlation between patient's total knowledge, their total quality of life and their total attitude. Also, there was highly significant positive correlation between patient's total quality of life and their total attitude. **Recommendations:** Conduct further studied to improve knowledge and quality of life of patients' diabetic with lower limb prosthesis.

Key words: Diabetic patients, Lower limb prosthesis, Quality of life.

BJAS-2302-1073

9. Occupational Health Hazards among Workers in Hospital Laundry Department at Benha City

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Abstract :

Background: Workers in hospital laundry have exhausting duties and are exposed to various environmental and work related problems. The aim of the study: was to assess the occupational health hazards among workers in Hospital Laundry Department at Benha City. Research design: A descriptive research design was utilized to conduct this study. Setting: The study was conducted at the laundry departments of Governmental and Non-Governmental Hospitals at Benha City. Sampling: A Convenience sample of all Hospital Laundry Workers 110 divided into 55 in Governmental Hospitals and 55 in Non-Governmental Hospitals was involved in this study. Tools: Two tools were used. Tool I: A structured interviewing questionnaire it consisted of four items: A: socio-demographic characteristics of the studied laundry workers. B: Job characteristics of the studied laundry workers. C: It was concerned with health problems among studied laundry workers. D: It was concerned with studied laundry workers knowledge about occupational health hazards and safety measures. Tool II: Observational checklist which consisted of two parts A: assess laundry workers practices regarding safety measures. B: Assess the workplace environment safety and sanitation condition. Results: 34.5% of the studied laundry workers in Non-Governmental Hospitals had poor knowledge about occupational health hazards. 92.7% of the studied laundry workers at Governmental Hospitals have health problems, while 85.5% of the studied workers at Non-Governmental Hospitals have health problems. 69.1 % of the studied laundry workers in Non-Governmental Hospitals had satisfactory regarding their total practices. Conclusion: the current study revealed that the majority of the studied laundry workers had health problems. Also illustrates that more than half of studied laundry workers in Governmental Hospitals had poor knowledge about occupational health hazards and the total practices levels of the studied laundry workers in Governmental Hospitals were unsatisfied. Recommendation: perform health education program for laundry workers about occupational health hazards and preventive measures .

Key words: Workers, Hospital Laundry, Occupational Health Hazards.

BJAS-2302-1076

10. Educational Health Program for Mothers regarding Care of Their Preschool Children with Trachoma in Benha City

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Abstract :

Background: Trachoma is an infectious disease; it begins in early childhood with repeated infection of the conjunctiva by Chlamydia trachomatis. Aim: The present study aimed to evaluate the effect of educational health program for mothers regarding care of their preschool children with trachoma in Benha City. Design: A quasi-experimental study design was used. Setting: The study was conducted in Outpatient Clinics at Ophthalmic Hospital in Benha City. Sample: Simple random sample of 271 mothers was included in the study within 3 months. Tools: Two tools were used to collect data; Tool (I): A structured interviewing questionnaire: Which divided into two parts; Part I included four items: Demographic characteristics of the studied mothers, personal characteristics of the studied children, health history of trachoma and environmental assessment as reported by mothers, Part II included knowledge of the studied mothers regarding trachoma and its prevention, Tool (II): Mothers reported practices regarding trachoma. Results: The study clarified that 34% of the studied mothers having preschool children aged 35 - < 40 years old with mean \pm SD was 39.31 ± 9.03 , 72.7% of them were married, 56.1% of them didn't work and 39.1% of the studied mothers not read and not write. 64.2% of the mothers had totally adequate knowledge and 91.9% of them had satisfactory totally reported practices for caring for their preschoolers with trachoma post program implementation. Conclusion: Utilization of health educational program achieving significant improvements in mothers' knowledge and practices. Also, there was a positive correlation between total scores of knowledge and reported practices. Recommendations: Continuous health promotion, health education models as well as screening in all community settings for early detection, prevention and management of trachoma through disseminating booklets.

Keywords: Educational program, Mothers, Preschool children, Trachoma.

BJAS-2302-1084

11. Home-Care Program for Patients with Permanent Pacemaker

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Abstract :

Background:- Pacemakers are devices that can be placed in the body, usually by surgery to support the electrical system in the heart stabilize abnormal heart rhythms and home care to prevent problems that can disrupt or endanger life. The aim of this study was to evaluate the effect of home-care program for patients with permanent pacemaker. Research's design: A quasi experimental design was utilized for this study. Setting: The study was conducted at National Heart Institution Cairo, Egypt(Cardiology department to get patients addresses) to collect the sample and followed by home visits. Sampling: simple random sample was recruited and included 364 patients who had permanent pacemaker insertion. Tools:- two tools were used. Tool I: A structured interviewing questionnaire divided in three parts. Part I: (A) socio- demographic characteristics of studied sample. Part II: medical history of the studied sample. Part III: Knowledge of studied sample. Tool II: Observational checklist filled by researcher during home visits, which covered two parts. Part I: Practices of patients at home regarding recovery after surgery to prevent complications. Part II: Home environment of the studied sample. Results:60.4 % of the studied sample were males, 21% cannot read & write, 50.8% of them made dual-chamber pacemaker, 42.3% of them hospitalized due to bradycardia, 34.6% of them had average total knowledge score about permanent pacemaker device and home care after recovery in preprogram, while 88.2% of them had good total knowledge score about surgery and home care in post program, 40.4% of them had satisfactory practices in pre-program, while 59.6% of them had satisfactory practices in post program, 75.2% of them had moderate in home condition and found positive statistical correlation between total knowledge and practices of patients through program This study recommended that emphasize the importance of providing support and appropriate follow up care for patients with permanent pacemaker in outpatient clinics by a specialized team in order to prevent complication and future researches should be applied for large number of patients to provide home care management program after permanent pacemaker surgery.

KeyWords: Home-care, Program for Patients, Permanent Pacemaker.

7. Nursing Administration

BJAS-2302-1052

1. Educational Needs Regarding Nursing Informatics and its Relation to Quality of Care as Perceived by Nurses

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Abstract :

Background: In both nursing practise and education, nursing informatics is crucial. In order to increase the quality of care, it is important to focus on the educational needs of nurses in relation to nursing informatics. **Aim:** Assess educational needs regarding nursing informatics and its relation to quality of care as perceived by nurses. **Design:** A descriptive correlational research design was used. **Setting:** Critical care units at Benha University Hospital. **Subjects:** Convenience sample included (418) nurses who had previously worked. **Tools of data collection:** Two tools were utilized. I) Nursing informatics educational needs questionnaire. II) Quality of care questionnaire. **Results:** the highest educational needs regarding nursing informatics was related nursing skills (74.9%), followed by computer skills (72.7%), then information technology skills (69.1%). Also (46.7%) of nurses perceived that educational needs of nursing informatics was high. About half of nurses reported that level of quality of care was high. **Conclusion:** There was negative statistically insignificant correlation between educational needs and quality of care. **Recommendations:** Hospital administrators need to conduct inservice training, workshops, seminar to increase awareness, gain support and engagement of nurses about nursing informatics .

Keywords: Educational needs, Nurses, Nursing informatics, Quality of care.

BJAS-2302-1055

2. Organizational Excellence and its Relation to Human Resources Management as Perceived by Academic Teaching Staff

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Abstract :

Background: Organizational excellence is a challenge that can be met through human resources management, which aids educational organizations in enhancing and increasing their capacity for productivity and competitiveness in their field. The study aimed to assess organizational excellence and its relation to human resources management as perceived by academic teaching staff. Design: A descriptive correlational design was utilized. Setting: The study was conducted in all academic departments at the Faculty of Nursing, Benha University. Subjects: Included all available academic teaching staff 103 who is working in the above mentioned setting. Two tools were used for data collection: Organizational Excellence Questionnaire, Human Resources Management Questionnaire. Results: Showed that the majority (91.3%) of the academic teaching staff perceived high level of organizational excellence and the most (82.5%) of them perceived high level of human resources management. Conclusion: The study concluded that, there was highly statistically significant positive correlation between total organizational excellence and total human resources management as perceived by the academic teaching staff. The study recommended that the Faculty administration should intensify the training of the academic staff on the standards of excellence management through seminars, workshops and forums. In addition to, providing continuous feedback individually to the academic teaching staff for identifying their strengths and weakness in the performance.

Keywords: Academic teaching staff, Human resources management, Organizational excellence, Faculty of Nursing.

BJAS-2302-1057

3. Nursing Staff Perception regarding Career Plateau and its Relation to their Work Engagement

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Abstract :

Background: Career plateau is a crucial determining factor that impacts both the organization and the nursing staff, which led to poor work outcomes as a decline in work engagement. Aim of this study: To assess nursing staff' perception regarding career plateau and its relation to their work engagement. Design: A descriptive correlational research design was utilized. Setting: The study was carried out in all inpatient units at medical and surgical buildings at Benha University Hospitals. Subjects: Consisted of the head nurses group (60) and simple random sample of staff nurses (295). Tools of data collection: Two tools were used for data collection; Career plateau questionnaire and Utrecht Work Engagement scale (UWES). Results: The highest percent (80%, 69.1%) of head nurses and staff nurses respectively had low perception level regarding career plateau. Also, the majority (90.2%, 80%) of staff nurses and head nurses respectively had high level of work engagement. Conclusion: There was a highly statistical significant negative correlation between total perception level of career plateau and total work engagement level among studied nursing staff. Recommendations: Providing nursing staff with education programs about their job description and road map for career advancement. Maintaining a supportive work environment for nursing staff by supplying all the resources necessary for their work and by using job enrichment to enhance their work engagement.

Keywords: Career plateau, Nursing staff, Work engagement.

BJAS-2302-1062

4.The Effect of Shared Governance Educational Program for Head Nurses on Nurses' Organizational Commitment

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Abstract :

Background: Shared governance requires collaborative leadership implemented on the principles of partnership, justice, responsibility and ownership. This actually accomplish many benefits to the organization and improve nurses' organizational commitment level. Aim: This study aimed to assess the effect of shared governance educational program for head nurses on nurses' organizational commitment. Research design: A quasi-experimental design was utilized in this study. Setting: The study was conducted at Kafer El Sheikh General Hospital. Subjects: Include all head nurses (60), and a simple random sample of (184) nurses, who were working at the previous setting. Tools: Three tools were used; (I) Shared Governance Knowledge Questionnaire, (II) Professional Shared Governance Questionnaire, and (III) Organizational Commitment Questionnaire. Results: The majority (88.3% and 76.6%) of head nurses had good knowledge at immediate post and follow up program phases, respectively, and the majority (93.3% and 85.0%) of head nurses had high shared governance level at immediate post and follow up program phases, respectively. The majority (89.7% and 66.8%) of studied nurses had high organizational commitment level at immediate post and follow up program phases, respectively. Conclusion: The educational program was successful and lead to improvement in head nurses' shared governance knowledge and level at immediate post and follow up program phases. In addition, there was a highly statistical significant positive correlation between head nurses' total shared governance knowledge and level and total nurses' organizational commitment level at immediate post program. Recommendations: Integrating the philosophy of shared governance into the values and mission of the organization through developing a set of policies that related to the principles and methods of its application. Maintaining a supportive work environment to promote nurses' organizational commitment.

Keywords: Commitment, Educational program, Head nurses, Nurses, Shared governance.

5. Effect of Leadership Styles Educational Program on Nurses' Autonomous Decision Making

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Abstract :

Background: Leadership style is viewed as a combination of different characteristics, traits and behaviors that used by nurse managers for direct interacting with their staff nurses. Therefore nurse managers have the ability to influence nurses autonomy and their ability to make decisions that positively influences health outcome that lead to organizational success Aim of the study: assessment the effect of leadership styles training program on nurses autonomous decision making. Design: A quasi-experimental research design was used in carrying out this study. Setting: this study was carried out in critical departments at Ain Shams University. Subject: the study subject include two groups as (46) nurse managers and (94) staff nurses. Data collection tool: included four tools will be used to collect data for this study as leadership styles knowledge questionnaire, leadership styles attitude questionnaire, leadership styles skills checklist and autonomous decision making scale. Result: displays, more than quarter (28%) of the head nurses had satisfactory knowledge of the leadership at the pre-intervention phase. This increased to 69% at the post-intervention phase and 83% at follow up. In addition, more than one third of the head nurses had paternalistic leadership style at the pre-intervention and post-intervention phase. While, more than two fifths of the head nurses had democratic leadership style at follow up phase. Also more than half of the head nurses had high level of leadership skills at the pre-intervention, this improve to most of them at post intervention phase and less than three quarters of them at follow up phase. Conclusion: there was highly statistically significant strong positive correlation between head nurses scores of knowledge and skills. There was highly statistically significant weak positive correlation between attitude of head nurse regarding leadership styles and autonomous decision-making of staff nurses. Recommendations: nurse managers should foster nurses' autonomy by enabling them to exercise clinical decision making and activity supporting nursing decisions and nursing accountability.

Key Words: Leadership, Educational program, Autonomous decision making& Nurses

BJAS-2302-1068

6. Shared Leadership as Perceived by Staff Nurses and Its Relation to their Performance

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Abstract :

Background: Shared leadership is a nursing management model that supports staff nurses in extending their influence about decisions that affect their work environment, professional development, and self-fulfillment that resulted in improve staff nurses' performance. Aim: Assess shared leadership as perceived by staff nurses and its relation to their performance. Design: A descriptive correlation design was utilized to conduct this study. Setting: Conducted in all inpatients Medical and Surgical Departments/ Units at Benha University Hospital. Subjects: Consisted of simple random sample of staff nurses, included 322 of them. Tools: I: Shared Leadership Survey, II: Staff Nurses Performance Observational Checklist. Results: Showed that more than half (52.2%) of head nurses had fair level of shared leadership as perceived by staff nurses. While more than one fifth (20.8%) of them had poor level of shared leadership as perceived by staff nurses. While more than half (50.9%) of the staff nurses had moderate level of performance While, less than one quarter (23.0%) of them had high level of performance. Conclusion: There was a highly statistically significant positive correlation between head nurses' shared leadership as perceived by staff nurses and their performance. Recommendations: Holding presentations for the nursing staff to educate them on the shared leadership system and practice and foster an inspiring work environment, create a new promotion structure that places more emphasis on skills and performance than on prior experience, and tie bonuses to accomplishments.

Keywords: Perception, Performance, Shared leadership, Staff nurses.

BJAS-2302-1069

7. Head Nurses' Resilience Skills and Its Relation to Their Motivating Behavior as Perceived by Nurses

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Abstract :

Background: Head nurses in any areas at hospitals are susceptible to stress, that make head nurses have to create work place optimal for the provision of nursing care by motivating and resilience their nurses. Therefore, it is important for head nurse to be resilient and able to motivates their nurses. **Aim:** This study aimed to assess head nurses' resilience level skill and its relation to their motivating behavior as perceived by nurses. **Design:** Descriptive correlational research design used in the study. **Setting:** The study was conducted at all medical and surgical departments at Benha University Hospitals. **Subject:** Consisted of simple random sample of nurses include 322 nurses working in the same setting. **Tools:** I: Head Nurses' Resilience Levels Skills Structured Questionnaire as perceived by nurses. II: Head Nurses' Motivating Behavior Questionnaire as perceived by nurses. **Results:** More than half of the studied nurses (51.2%) had moderate level regarding head nurses' resilience skills. and more than half of the studied nurses (52.8%) had moderate level regarding head nurses' motivating behavior. **Conclusion:** There were highly statistically positive relations between head nurses' resilience skills and their motivating behavior as perceived by nurses. **Recommendations:** Conducting organizational workshops to reinforce head nurses' resilience skills and keep the progress of motivating leader behaviors and Supporting motivating by enough resource, preparation and time that help in building relationships, training program for head nurses and communicating effectively.

Keywords: Head nurses, Motivating behavior, Nurses, Resilience skill.

BJAS-2302-1070

8. The Relation between Caring Leadership and Crisis Management during Covid 19 as Perceived by Nursing Staff

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Abstract :

Background: Caring leadership concern for others that can positively affect on the behave of the nursing staff in crisis management during COVID-19. Aim of this study: Assess the relation between caring leadership and crisis management during COVID-19 as perceived by nursing staff. Study design: A descriptive correlational design was utilized. Setting: The study was conducted at Benha University Hospital in all Critical Care Units. Subjects: Consisted of all the available head nurses and their assistance 50 and the staff nurses 250 in all critical care unit. Tools of data collection: Two tools were used in data collection; Caring Leadership Questionnaire and Crisis Management Questionnaire. Results: Clarified that the highest percent (90.0% & 77.2%) of the head nurses and staff nurses respectively had high levels toward caring leadership during COVID-19. While the lowest percentage (4.0% & 3.6) of head nurses and staff nurses respectively had low levels. Also, the highest percentage (60.0% & 75.2%) of head nurses and staff nurses respectively had high levels toward crisis management during COVID-19. While the lowest percentage (22.0% & 3.2%) of the head nurses and staff nurses respectively had low levels. Conclusion: There was a highly statistically significant positive correlation between total score of caring leadership and total score of crisis management during COVID-19 as perceived by nursing staff. Recommendations: Head nurses provide nurses with supportive environment to achieve work goal. Also, conducting training programs and workshop to the nursing staff to improve their knowledge about managing COVID-19 as the proper using of oxygen therapy with COVID-19 patient .

Keywords: Caring leadership, Crisis management, COVID-19, Nursing staff.

BJAS-2302-1080

9. Artificial Intelligence Technology and its Relation to Decision Making Abilities as perceived by First Line Managers

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Abstract :

Background: Artificial intelligence technology is becoming vital for supporting first-line managers and other healthcare providers in healthcare delivery, and decision-making abilities. The study aimed to assess artificial intelligence technology and its relation to decision making abilities as perceived by first line managers. Study design: Descriptive correlational design was utilized to conduct this study. Setting: The study was conducted in all inpatient units at Benha University Hospital. Subjects: Included all available first-line managers 57 who are working at the previously mentioned study settings during the time of data collection. Tools: Two tools were used for data collection; (1st tool) Artificial intelligence technology questionnaire, and (2nd tool) Decision-making abilities scale. The study results showed that, the majority (80.7% & 84.2%) of first-line managers had high perception level toward artificial intelligence technology, and high decision-making abilities levels, respectively. Also, less than one fifth (15.8%) of them had moderate perception level of artificial intelligence technology, and moderate decision-making abilities levels. The study concluded that, there was a highly statistically significant positive correlation between total artificial intelligence technology and total decision-making abilities as perceived by first-line managers. The study recommended that, enhancing the readiness of organizations for using artificial intelligence through providing good infrastructure and budgeting, and developing a reward system for first-line managers with effective decision-making to encourage others to do the same.

Keywords: Artificial intelligence technology, Decision making abilities, First line managers, Perceived.

10. Effect of Nursing Interns Entrepreneurship Education Program on their Motivation

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Abstract :

Background: Nursing entrepreneurship is a private, independent and self-employed practice. Nursing interns have opportunities to become entrepreneurs through effective entrepreneurial motivation process. Aim: To assess the effect of nursing interns' entrepreneurship education program on their motivation. Design: A quasi experimental design was used pre, immediately post and follow up (after 3 months) program phase. Setting: Conducted in nursing interns' clinical training areas according to the policy of internship by nursing sector committee at Beni-Suef University Hospital. Subjects: A systematic random sample of nursing interns (n=84) who are enrolled in the internship year 2021-2022 and available at the time of study. Tools: I: Entrepreneurship knowledge questionnaire, II: Attitude toward entrepreneurship questionnaire, III: Skills toward entrepreneurship questionnaire, IV: Nursing interns' motivation questionnaire. Results: Most of nursing interns (77.3% & 76%) had satisfactory knowledge level at immediately post and follow-up (after 3 months) program phases respectively, most of nursing interns have positive attitude (76% & 72%) at immediately post and follow-up(after 3 months) program phases respectively, majority of nursing interns (90% & 85%) had a competent skills level at immediately post and follow up (after 3 months) program phases respectively, about two thirds of nursing interns' motivation had moderate levels (70% & 65%) at immediately post and follow-up (after 3 months) program phases respectively. Conclusion: There was a highly statistical significant positive correlation between total knowledge, total attitude, total skills and total motivation through all program phases. Recommendations: The faculty of nursing should provide training programs and workshops about entrepreneurship particularly in health care sector especially for nurses, hospital management should emphasis on new trends in nursing administration such as nursing entrepreneurship to increase nurses' motivation.

Keywords: Education program, Entrepreneurship, Motivation, Nursing interns.



Scientific Sessions

Topics of Basic Science

BJAS-2303-1107

1. Molecular Validation for Impossible Transmission of TYLCV through Mechanical Route

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Abstract :

Tomato yellow leaf curl disease is a major limitation in agriculture across the world, affecting the production of many crops, resulting in significant economic losses. In Egypt, the incidence of infection is very high, with visual estimates of TYLCV infection reaching 100 % in some areas. Here in the mechanical transmission ability of TYLCV is assessed in different plant species well known to be hosts for the TYLCV. The current finding revealed the failness of transmission through mechanical route. None of the mechanically infected plants developed TYLC disease symptoms. Furthermore, the absence of TYLCV genome within mechanically transmitted plants was also validated. Alignment of the amplified partial TYLCV genome from the naturally infected plants from Qalyubia governorate, show 98.99% similarity and 100% query coverage to the TYLCV in the GenBank. In conclusion, the TYLCV can't transmit through mechanical route this may be a result of failing its genome to be establish within plant genome.

Keywords: Tomato, Gene sequencing, Host range, Geminivirus.

BJAS-2303-1113

2. HPLC Validation and Stress Degradation Behavior of Etoricoxib in Tablets Dosage Form

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Abstract :

Etoricoxib is a new COX-2 selective inhibitor. Current therapeutic indications are the treatment of rheumatoid arthritis, osteoarthritis, ankylosing spondylitis, chronic low back pain, acute pain, and gout. Like any other COX-2 selective inhibitor, Etoricoxib selectively inhibits isoform 2 of cyclo-oxygenase enzyme (COX-2) to reduce the generation of prostaglandins (PGs) from arachidonic acid. Effective chromatographic separation method for etoricoxib was achieved using HPLC instrument by Luna C18 – (150X4.6mm, 5µm) column with isocratic elution of the mobile phase consisting of buffer pH 3.5 of 0.01M potassium dihydrogen phosphate (1.36g/L): acetonitrile: methanol (40:15:45 v/v/v). The wavelength of detection was set to be 235 nm (UV detector), and a flow rate of 1.0 ml/min was employed, 10 µl was used as injection volume and the column temperature was maintained at 30°C. A rapid, simple, and selective reversed-phase high-performance liquid chromatographic method was developed and validated for the assay of Etoricoxib in its pharmaceutical formulation, under these chromatographic conditions, the peak of Etoricoxib was obtained at a retention time about 5.1 min. and run time of about 7.0 minutes. The developed method was validated in terms of accuracy, precision, linearity, limit of detection, and limit of quantitation. The proposed method can be used for the assay of these drugs in dosage form for routine analysis, this has already been applied to different samples, and this is explained in the applications section.

Keywords: Etoricoxib; HPLC; Validation; ANOVA (Analysis of variances); Forced degradation.

BJAS-2303-1115

3. Determination of the Genotype-adenovirus that Causes Multiple Infections

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Abstract :

Background: Human Adenovirus (HAdV) is considered one of the important viruses that infect humans and cause multiple infections in the body, it is one of the important causes of conjunctivitis, respiratory and gastrointestinal infections, causing diarrhea. The current study was done to determine the genotype of HAdV in Egypt.

Materials: The study was conducted from November 2021 to November 2022. 120 samples (90 stool samples and 15 conjunctival and 15 respiratory samples) were collected from different regions of Egypt, Information related to age, sex and region were recorded. The HAdV was detected serologically by ILFST test. The positive samples were cultured and HAdV isolated on Vero cell lines. HAdV was collected from infected cells and then identified using the multiplex PCR technique. The genotype HAdV was determined through bioinformatics.

Results: Through this study, ILFST test, HAdV was detected in 20 (22.22%) out of 90 stool samples, while the conjunctival and respiratory samples were negative. 12 out of 20 samples were cultured on Vero cells. The cytopathic effect CPE was observed with 6 out of 12 samples. Three samples were identified as adenovirus using the multiplex PCR, and confirmed by agarose with expected 350 bp. The nucleotide sequences of 3 isolates were aligned with HAdV isolates recorded in gene bank with 96-98 %. The three HAdV isolates appeared that belong to genotype F-40 by phylogenetic tree. Interestingly, the Human adenovirus genotype F-40 was the most common genotype in Egypt. Our work revealed the infection rate, virus isolates, genetic diversity, seasonal distribution, of HAdV infections in samples in Qalyubia, Cairo and Alexandria. Through this study and previous studies that converge with it in some results in Egypt and some countries of the world, enteric adenovirus genotype F especially the serotype 40, play a key role in gastroenteritis especially for those under five years old in Egypt.

Keywords: HAdV, ILFST, multiplex PCR, Vero cell lines.

BJAS-2303-1117

4. Green Design of Novel Heterocycles Using Deep Eutectic Solvent and Evaluation of Their Cytotoxicity and Antioxidant Activities

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Abstract :

A series of chalcone derivatives **1a-c** was synthesized according to green chemistry methodology using deep eutectic solvents as greener solvents. Chalcone **1a** was used as a versatile starting material for the synthesis of variety of heterocyclic systems including isoxazoline, pyrazoline, pyrimidine and pyridine moieties. Elemental analyses and spectral data (IR, MS, ¹H NMR, ¹³C NMR) were used to elucidate the structural formula of the products. The cytotoxicity of the prepared derivatives was screened using 3-[4,5-dimethylthiazole-2-yl]-2,5-diphenyltetrazoliumbromide (MTT) assay against three tumour cell lines namely; hepatocellular carcinoma (HePG-2), mammary gland (MCF-7) and colorectal adenocarcinoma (Caco-2) where the cytotoxic effects showed that pyrazoline derivatives (**4**) induced a significant growth inhibition towards tested cell lines while 1,2-dihydropyridine-3-carbonitrile derivatives (**7**) showed the lowest activity. Additionally, antioxidant activity of the products was evaluated using 2, 2-diphenyl-2-picrylhydrazyl (DPPH) radical scavenging method, the results exhibited that compounds 4,5-dihydro-1*H*-pyrazole-1-carbothioamide (**2b**) and 4,5-dihydro-1*H*-pyrazole (**3**) showed potent activity in comparison with ascorbic acid as standard.

Keywords: Chalcone; deep eutectic solvent; heterocycles; cytotoxicity; antioxidant.

BJAS-2303-1132

5. Hydrothermal Modification of Ceramic Waste : Characterization, Optical Properties and Low-Cost Adsorbent Agent for Removal Organic Dyes

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Abstract :

In this research, the sanitary ware waste is modified by the addition of sodium hydroxide via the hydrothermal method. The obtained product was characterized utilizing different techniques such as X-ray diffraction (XRD), Fourier-transform infrared spectroscopy (FTIR), and Diffuse reflectance spectroscopy (DRS). XRD showed the synthesized samples before and after calcination containing the two phases Faujasite-NaY and Sodalite. The average crystallite sizes of S17R and S17C samples were recorded from the x-ray diffraction peaks to be 24.6 and 15.4 nm, respectively. Also, the optical properties were studied using diffuse reflectance spectroscopy. The band gap and color analysis of the synthesized products were studied. The values of light and solar reflectance were determined using JISA5759 2008, and JISK5602 2008 methods. In addition, the prepared products have an efficient adsorption performance to anionic dyes (sunset yellow, naphthol green B, and amaranth dyes). The maximum adsorption capacities of S17R and S17C samples toward sunset yellow, naphthol green B, and amaranth dyes are 65.38/39.1/51.66 mg/g and 82.7/46.97/58.33 mg/g, respectively.

Keywords: Ceramic waste; Adsorption; Anionic dyes; Optical properties; color analysis.

BJAS-2304-1152

6. Geochemical Characteristics of the Syn-Tectonic Granitoids along Wadi El-Sheikh Area, South Sinai, Egypt.

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Abstract :

Wadi El-Sheikh area located at south Sinai which, characterized by abundant intrusion of calc-alkaline and alkaline/peralkaline granitoids and their associated volcanic. These granitoids have a particular geodynamic interest as they provide an outstanding opportunity to tell how continental crust of Arabian Nubian Shield (ANS) was formed. Thus, the present study introduces new detailed geological field studies, Petrological, and whole rock geochemical data for a selection of I-type granitoids along Wadi El-Sheikh. The older granitoids (OG) ranging in composition from quartz diorite, tonalite to granodiorite. Geochemically, this OG are mainly metaluminous, calc-alkaline and I-type and belonging to syn-collision volcanic arc granitoids. The studied granitoid rocks show high $\text{CaO}/\text{Na}_2\text{O}$ ratios (0.33 - 1.44) being a decrease from quartz diorite to granodiorites, whereas they have also high $\text{Al}_2\text{O}_3/\text{TiO}_2$ ratios (17.85 – 80.70) increasing toward the higher silica granitic type (granodiorite). These characters indicate that emplacements of OG were strongly affected by magma mixing of felsic and mafic melts. Depth of magma segregation indicate that the studied granitoids have generated at water pressure in the 0.5 – 10 kbar and temperatures of about 650°C - 700°C, and have been generated at greater depth >30 km of the lower crust. The studied OG are generally characterized by enrichment of LILE and LREE and depletion of HFSE relative to N-MORB values (e.g., negative Nb and Ta anomalies).

Keywords: Wadi El-Sheikh, Syn-tectonic, ANS, depth of magma segregation.

BJAS-2304-1157

7. The Impact of Rock-forming Minerals on Groundwater, Samalut Aquifer, West Minia, Egypt

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Abstract :

The water-mineral interaction processes can strongly impact the quality of groundwater. The present study focuses on determining these processes and assessing their role on the groundwater evolution in Samalut aquifer which is composed of fractured and karst carbonates. The aquifer was recharged mainly from Nile floods before the construction of Aswan High Dam (AHD). Forty-four groundwater samples of Samalut aquifer and three surface water samples of the Nile River, Ibrahimia Canal and Bahr Yusef Canal were collected and analyzed for major ions. The groundwater salinity ranges from 407 mg/l (well no. 33) to 2467 mg/l (well no. 17). It increases due northwest. Six representative rock samples of Samalut Formation were collected from its outcrops and drilled wells. The mineral composition of these samples has been identified by X-Ray Diffraction (XRD). They are composed of calcite, dolomite, gypsum, anhydrite, halite, illite and ankerite. The mineral-water interaction processes were determined by the inverse hydrogeochemical modeling using NETPATH. These processes include the precipitation of calcite, the removal of calcium and magnesium in exchange for sodium as a result of freshening by the recharge from the Nile, and the dissolution of gypsum.

Key words: West Minia, Mineralogy, groundwater evolution, NETPATH

BJAS-2303-1118

8. Determination of Spectinomycin Sulfate Tetrahydrate and Lincomycin Hydrochloride by HPLC in Veterinary Products (Mycospectin oral powder)

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Abstract :

Developing a high-performance liquid chromatography separation technique that is quick and precise and quantification of both spectinomycin sulphate tetrahydrate and lincomycin hydrochloride in the veterinary formulation drug. This method is applied on an HPLC Agilent 1260 with a UV detector using 150X 4.6 mm BDS hypersil cyano column, Particle size 5 μ m. Mobile phase: 95% buffer (dissolve 3.5 g potassium dihydrogen phosphate in 1000 ml distilled water and adjust pH to 6.5 with 1N sodium hydroxide):5 % acetonitrile, Flow rate 1.0 ml/min, Wavelength 220 nm, Injection volume 10.0 μ l and ambient column temperature.. The calibration curve of spectinomycin sulphate tetrahydrate and lincomycin hydrochloride was linear with a correlation coefficient that should be more than 0.99 between 50% and 150% of the desired concentrations. It is determined by preparing five concentrations of spectinomycin sulfate tetrahydrate (6.72, 10.08, 13.44, 16.8 and 20.16 mg/ml) and lincomycin hydrochloride (2.513, 3.7695, 5.026, 6.2825 and 7.539 mg/ml). Linearity results of spectinomycin sulfate $r=0.9999$ NLT, Linearity results for Lincomycin hydrochloride = 0.999 so the method is found to be linear as r is more than 0.99, The result of relative standard deviation was ≤ 2 . The suggested technique was verified and successfully used for the separation and quantification of both spectinomycin sulphate and lincomycin hydrochloride in the veterinary drug.

Keywords: RP-HPLC; Spectinomycin sulphate tetrahydrate; Lincomycin hydrochloride; Forced degradation; Method Validation.



Scientific Sessions

Topics of Agriculture Science

1. Chlorophyll Content and Yield Responses for Withholding Irrigation and Si Foliar Spray at Normal and Nano Source Under Different Critical Growth Stages of Wheat

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Abstract :

To determine the most important stages for skipping (withholding) irrigation, Investigate the role of silicon and irrigation rates in alleviating water stress effect on improving wheat production in the much critical stages, and Investigation the effect of K-silicate as an anti-stress substance on wheat under drought stress has been investigated, a field factorial experiment on wheat was carried out during the 2021–2022 growing season. Six treatments make up the first factor. The following treatments were used: I₀ no skipping; I₁ skipping at tillering (20 days after seeding "AS"); and I₂ skipping at the vegetative stage (45 days AS). I₃ skips flowering (60 days AS), I₄ skips milk (90 days AS), and I₅ skips the dough stage (110 days AS). Two Si treatments were performed: S₁ normal Si and S₂ Nano dose (2, 4, and 6 mL SiL⁻¹) spray solutions of D₁, D₂, and D₃. Plants treated with K silicate produced yields ranging from 6.116 from S₁D₁I₁ to 8.615 from S₂D₃I₀, representing increases of 3.6 to 45.9%, respectively, over the non-Si treatments' average yield. Plants not getting silicates produced grain yields of I₁ (withholding irrigation during tillering) and I₀ (without withholding), which ranged in size from 5.045 to 6.175 Mgha⁻¹, respectively. Plants that received silicates produced grain yields that ranged from 5.413 from S₁C₁I₁ to 8.279 from S₂C₃I₀, a growth of 52.95%. The main consequence of the Nano application is a rise of 5.04%. I₁ (skipping at tillering) had the lowest yield of all the irrigation methods, producing 5.958 Mgha⁻¹. The greatest was I₀, which produced 7.926 Mgha⁻¹, an increase of 33.03%, with no irrigation being withheld. Following is a list of the main effects of irrigation I₁ > I₅ > I₆ > I₄ > I₃ > I₂. It can be concluded that S₂ Nano dose at 6 mL SiL⁻¹ might be used as an anti-stress substance otherwise regardless of the critical wheat growth stages without any further effects on the yield. Moreover, tillering is the most critical wheat growth stage, so it is not recommended to withhold irrigation, especially in this stage.

Keywords: S₂ nano - withholding irrigation- Chlorophyll content - skipping (withholding) irrigation

BJAS-2302-1101

2. Evaluating the Performance of a Planting and Reservoir tillage Machine at Different Tractor Forward Speeds under Rainfed Conditions for Wheat Crop in Northwestern Coastal, Egypt

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Abstract :

Northwestern Coastal of Egypt is located within arid and semi-arid zone. Whereas soil topography is characterized by large slopes which cause high surface rainwater runoff. This makes this region more vulnerable to soil erosion hazards that threaten the sustainable development of rainfed agriculture. Therefore, this research aims to evaluate the performance of a manufactured planting and reservoir tillage machine (PRT) used to harvest rainwater and planting of wheat crop at one pass on sloping area of a sandy loam soil in Wadi El Raml during winter cultivation season of 2021-2022. Field experiment was conducted to maximize efficiency of using limited rainwater unit and wheat yield productivity under rainfed conditions with lowest operating costs and lower negative impact of carbon dioxide (CO₂) emissions on environment. The statistical design was a split plot with three replicates for each treatment. Main plots included three of tractor forward speeds of 3, 5 and 7 km/h. Sub main plots included three types of pits' dimensions of 0.50×0.14×0.20 m (PD1), 0.60×0.17×0.14 m (PD2) and 0.70×0.20×0.10 m (PD3) for length×width×depth m, respectively with same volume of 10.35 liters, in addition to traditional cultivation. The results revealed that using PRT machine at forward speed of 3 km/h and pit dimensions of PD1 achieved the most efficient performance. Whereas it recorded the greatest values of soil moisture storage, wheat grain and straw yields and net profit by about 105.77%, 60.25%, 53.62% and 61.55%, respectively compared to traditional cultivated. While the least CO₂ emissions achieved at forward speed 3 km/h and at pit dimensions of PD3.

Keywords: Rainwater harvesting, Reservoir tillage, Farmyard manure, Wheat yield productivity, CO₂ emissions.

3. Biotechnological Studies on The Taro Plant

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Abstract :

The present study was carried out during the period from 2016 to 2018 for two parts of the experimental work. The first part was in vitro culture and the second part was in vivo culture using the Egyptian local taro cultivar (*Colocasia esculenta* var. *esculenta*, Schott.). In vitro experiments were conducted at the plant tissue culture laboratory , Horticulture Department, Faculty of Agriculture, Benha University , to improve number and growth of plantlets in vitro propagation and then to evaluate the field performance of in well adapted tore plants obtained by meristems culture as Compared with the traditional propagation methods, i.e. by apical meristems ,leaf pieces ,stem segments and cormal pieces .Results indicated that leaf pieces induced 90% of callus, while stem segments Formed 80% of callus .The apical meristem and cormal pieces did not induce callus after 2 weeks of culturing on MS medium supplemented with to BAP and NAA only explants of apical meristem produced shoots (98%). As for the production of callus, Apical meristem (zero%), leaves (90%), stems (80%) and cormel (zero %). As for the production of shooting, Apical meristem (98%) and the other parts (zero%). These results clearly indicate that among the tested growth regulator types at different concentrations, the Apical meristem was the most effective ones to produce the highest number of shoots and leaved explant and the cormel pieces was the least. The treatments BAP (0.20mg/L) and NAA (0.1mg / l) and (40g) sugar gave the highest values of roots number (3.16 and 4.01 roots). The lowest treatments in this regard were BAP at (0.2 mg/l), NAA at (0.1mg /L) and 30g sugar as well as control treatment which scored (2.74 and 3.02 roots), respectively. The rest treatments gave roots number values between these two extremes. The results illustrated that the best media for acclimatization was peat moss which produced 100% of survival plants.

Keywords: in vitro, tissue culture, shoot multiplication, taro, Kinetin, BAP, NAA.

BJAS-2303-1105

4. Short-term Effect of Two Agricultural Wastes Derived Biochars on Some Physiochemical Properties of a Sandy Loam Soil

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Abstract :

Biochar has not been adequately used by farmers to improve the soil properties in the world and less attention is given to effects of biochar (BC) in semi-arid and arid environments with few studies in sandy soils. So, agricultural applications of biochar (BC) to these soils should be considered as a possible way of improving productivity and sustainability. A pot experiment was conducted in winter season of 2020 (20th of November) to evaluate the effect of two different biochars derived from palm tree wastes (PTWB) and olive pomace wastes (OPWB) on some physical and chemical properties, including available nutrients (N, P and K), EC, pH and bulk density. The soil was loamy sand and collected from Elshekha Salam region, at Meet Kenana village, Tukh City, El-Qalubiea Governorate, Egypt. Treatments consisted of a factorial combination of two types of biochar (PTWB and OPWB) and three biochar levels (0, 0.5 and 1%). The experiment was arranged in a randomized complete block design with three replicates. The results showed that PTWB and OPWB led to marked changes in the studied physiochemical properties and the influence of PTWB on these properties was lower than OPWB. EC, pH and available N, P and K values were recorded as follows 5.15 dS m⁻¹, 8.29, 32.73 mg kg⁻¹, 14.28 mg kg⁻¹ and 244.4 mg kg⁻¹, respectively, due to application of 1% OPWB, whereas the respective values in the control treatment had the lowest values of these items and were as follows 3.76 dS m⁻¹, 8.03, 23.13 mg kg⁻¹, 11.99 mg kg⁻¹ and 132.0 mg kg⁻¹. Application of PTWB and OPWB in the sandy loam soil decreased its bulk density and the use of 1% of OPWB was responsible for its lowest value (1.36 g cm⁻¹). Our results concluded that both PTWB and OPWB could be recommended as promising amendments for improving the physiochemical properties of sandy loam soils.

Keywords: Biochar, organic wastes, sandy soil, physio-chemical properties

BJAS-2303-1111

5. Toxicity and Biochemical Effects of Citronella, Mustard and Sage Essential Oils and their Nanoemulsions Against *Spodoptera littoralis* (Boisd.) (Lepidoptera: Noctuidae)

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Abstract :

This study aimed to investigate the toxicity of citronella, mustard, and sage essential oils in comparison to their nanoemulsions. Laboratory bioassays were conducted against the 2nd and 4th instar larvae of *Spodoptera littoralis*. The results indicated that the LC₅₀ values were 0.231, 1.898 and 2.500% for bulk oils of mustard, citronella, and sage against 2nd instar larvae of *S. littoralis*, respectively, while they were 0.253, 0.266, and 0.962% for their nanoemulsions, respectively. The LC₅₀ values were 0.889, 3.358 and 0.995% for bulk oils of mustard, citronella, and sage against the fourth instar larvae, respectively, while the LC₅₀ values of their nanoemulsions were 0.657, 0.572 and 0.488%, respectively. The fourth instar larvae were treated with LC_{50s} concentrations of tested essential oils and their nanoemulsions to estimate the biochemical changes. The results showed that there was a significant increase in stimulation of AChE activity, in the case of mustard and citronella bulk and nanoemulsions, while there were no significant changes in sage oil bulk treatment and its nanoemulsion compared with the control. Also, there was a significant decrease in activity of GST enzyme in mustard, citronella bulk oil and mustard nanoemulsion. In contrast, the activity of GST increased significantly in the treatments of sage bulk oil, mustard, citronella and nanoemulsion of sage oil. Alpha esterases activity decreased significantly in all treatments except nanoemulsion of mustard oil which caused a significant increase in the enzyme activities compared with the control.

Keywords: Bioassay, Essential oils, mortality, lethal concentrations, Enzymes

BJAS-2303-1114

6. Heavy Metals (Co, Cd, and Pb) Concentration in Soil and Taro Plant at Various Distances from a Phosphate Fertilizer Factory

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Abstract :

At distances of C₀, C₁, C₂, C₃ and C₄ of 0, 200, 400, 800, and 1600-m from the Abu-Zaabal phosphate fertilizer factory, samples of soil at D₁, D₂ and D₃, i.e., depths 0-30 cm, 30-45cm and 35-60cm as well as samples of taro plants (*Colocasia esculenta*) were collected for analysis of Co, Cd, and Pb. Highest Co in soil was at D₂ compared with D₁ or D₃ samples of taro fruit collected from the research zone had heavy metal contents that followed a trend of C₀>C₄> C₁>C₃>C₀. The highest Co of 0.208 g kg⁻¹ in taro shoots, was found at C₂. A pattern of C₂>C₀>C₃>C₁>C₄ was given by Co. The greatest Pb content in Taro soil was 258 mg kg⁻¹, with an increase of approximately 71% across a 400 m distance and a depth of 0-15 cm.

Keywords: Taro; heavy metals; soil and water pollution; Co, Cd, and Pb

7. Effect of Reservoir Tillage System and Organic Fertilization on Soil Water Erosion Resistance Under Rainfed Conditions

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Abstract :

Northwestern coastal region of Egypt is characterized by severe slop nature, which makes it more vulnerable to soil erosion by water. In addition to losing the fertile topsoil layer, which causes its degradation and low productivity. This research aims to mitigate water soil erosion by applying a reservoir tillage system by locally manufacturing a planting and reservoir tillage machine (PRT). In addition to conducting wheat crop mechanical planting in one pass. A field experiment was conducted under wheat crop rainfed condition on a sandy loam soil in Wadi El Raml during winter cultivation season of 2021-2022. This field experiment aims to investigate the effect of using a reservoir tillage system and organic fertilization on mitigation water soil erosion under rainfed condition. The statistical design of the experiment was a split plot with three replicates for each treatment. Main plots included two fertilization rates of farmyard manure of 0 and 25 m³/ha. Sub main plots included three types of pits' dimensions which were 0.50×0.14×0.20 m (PD1), 0.60×0.17×0.14 m (PD2) and 0.70×0.20×0.10 m (PD3) for length× width× depth m, respectively with same volume of 10.35 liters. In addition to traditional cultivation as control treatment with three replicates. The results revealed that using the PRT machine at pit dimensions of PD1 with the addition of farmyard manure decreased the rainwater surface runoff and soil loss by about 85.67% and 74.76%, respectively, while increased wheat grain and straw yields and net profit by about 88.44% 79.69% and 73.97%, respectively, compared to traditional cultivation.

Keywords: Reservoir tillage, Farmyard manure, Rainwater runoff, Soil loss, Wheat yield productivity.

8. Removal of Cesium from Contaminated Soils Using EDTA and DTPA

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Abstract :

Soil contamination with Cs possesses a serious environmental threat; and therefore, its remediation is an obligation to ensure environmental safety. The current study aims at evaluating the efficiency of using either EDTA-Na or DTPA as chelating agents for removal of Cs from contaminated soils. Three soil types (one alluvial and two sandy loam soils of different CaCO₃ contents) were selected to attain this aim, then artificially contaminated with CsCl at three levels i.e., 50, 100, and 200 mg Cs kg⁻¹. These samples were subjected to sequential extraction pre- and post- leaching to find out Cs redistribution among different soil fractions after soil washing. The implications of soil washing with the investigated chelating agents on decreasing the risk assessment hazards associated with Cs hazards are discussed in this study. Key results indicate that DTPA was more efficient in removal of Cs from contaminated soils than did the EDTA-Na and both decreased considerably soil Cs, particularly from the mobile (water soluble and exchangeable fractions) and carbonate bound fractions. Accordingly, the calculated risk assessment code declined noticeably from “very high risk” levels (more than 50) to “medium risk” levels (ranging from 30 to 50) for most spiked soils. In conclusion, DTPA and EDTA-Na are effective chelating agents in reducing the risks associated with Cs contamination in soils.

Keywords: Cesium fractionation, washing, risk assessment code, EDTA-Na, DTPA.

BJAS-2304-1158

9. Application of ZnO Nanoparticles for Wastewater Treatment and Antimicrobial Activity

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Abstract :

The present work used ZnO-NPs from the aqueous extracts of *Moringa Oleifera*, *Ocimum Tenuiflorum*, and *Neem (Azadirachta indica)* leaves as adsorption for the removal of heavy metals such as Cu^{+2} and Ni^{+2} were studied to investigate the effect of zinc oxide nanoparticles ZnO-NPs versus contact time and different concentrations. The maximum percentages of Cu (II) and Ni (II) versus contact time removal were found to be (99.94%) from the *Neem (Azadirachta indica)* leaves and *Ocimum Tenuiflorum* leaves for Cu (II) and (75.70%) from *Neem (Azadirachta indica)* leaves for Ni (II), respectively at the same time (50 min). In cases of versus the difference concentration percentages of Cu (II) and Ni (II) of ZnO-NPs, the highest produced from *Neem (Azadirachta indica)* leaves was (99.99 and 97.60 respectively) at the same dose (0.01g/100 ml). Also, the ZnO-NPs exhibited strong antibacterial activity was evaluated toward were tested for *Bacillus subtilis* (gram-positive) and *E. coli* (gram-negative) bacteria at a concentration (75, 150, 300, 450, and 600 mg/ml), the highest produced at the concentration (600 mg/ml) the antibacterial activity towards varied extensively with the synthesis parameters. This study presents an efficient green synthesis of ZnO nanoparticles that have potential applications in antibacterial activity.

Keywords: wastewater; ZnO nanoparticles; heavy metals; antibacterial



Scientific Sessions

**Topics of
Engineering, Computer &
Technology Science**

1. Analytic Model for The Transmission and Reflection in Two Cascaded Stages of Fiber Bragg Grating.

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Abstract:

The fundamental issue limiting long-distance and high-speed optical fiber transmission is dispersion. Dispersion impairs system performance, the signal-to-noise ratio (SNR), and the bit error rate (BER). To address this, numerous dispersion modification techniques have been developed. The use of fiber Bragg grating (FBG) is one of the efficient strategies for dispersion compensation. The FBG is frequently used as a filter. The proposed model uses uniform fiber Bragg grating UFBG. Two cascaded FBGs with varying lengths, a constant grating period, and a constant spacing between FBGs are employed in the proposed thesis. The input signal for the stage that follows is the output signal from the previous stage. The best performance and many applications are considered while modeling, analyzing, and comparing this system. Transmission and reflection in two cascaded stages of fiber Bragg grating using first and second order are studied. The mathematical equations for the proposed model are simulated in MATLAB.

Keywords: Fiber Bragg grating (FBG), Dispersion compensation, cascaded FBGs.

BJAS-2304-1156

2. Material Removal Rate Mechanism of 90W-7Ni-3Fe Alloys Using Wire Electrical Discharge Machining

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Abstract :

Tungsten heavy alloys (WHAs) are desired in many applications, including gyroscope rotors for aerospace and spacecraft, die-casting molds, and shielding elements for radiation protection. Owing to their superior physical, chemical, and mechanical characteristics, which as high density, great radiation shielding capability, high strength, low thermal expansion, high anti-impact toughness, and good corrosion resistance. However, such applications require highly precise complex geometries. Cutting WHAs using conventional machining processes is challenging due to rapid tool wear and high time consumption. In this paper, Wire Electrical discharge machining (WEDM) is utilized for investigating the machinability of heavy tungsten alloys with a composition of 90W7Ni3Fe. Half factorial design of the experiment was conducted to investigate the effect of machining variables on the material removal rate. The variables include arc-on time (AON), arc-off time (AOF), open voltage (OV), feed rate (FR), servo voltage (SV), and wire tension (WT). An additional ANOVA test was conducted to investigate the significant effect of each variable. The results showed that (FR) has the highest impact on MRR, followed by (SV), (OV) and (AON) which in turn enhance the surface quality. A regression model was developed for predicting the MRR with an accuracy of 90.37%.

Keywords: 90W7Ni3Fe, WHAs, WEDM, MRR, Half factorial.

BJAS-2303-1110

3. Assessment of Terrestrial Laser Scanning (TLS) Behavior Against Material and Color for Short Range Applications

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Abstract :

Terrestrial laser scanners provide high spatial resolution and accuracy three-dimensional (3D) data where data collection does not necessitate physical contact with the object if interest. For these reasons, point-cloud coordinate information acquired is widely utilized in a variety of surveying and civil engineering applications in addition to many applications in the close-range domain. Several publications have investigated the quality of the data, to ensure the achievement of high accuracy and examine the several factors influencing it, as one important feature of TLS-based object acquisition and modelling is data quality, which is used to determine the compatibility for a specific application. Some publications on the data quality of TLS and mainly concerning geometric accuracy, reflectivity of standard targets or the influence of different realistic object materials and object colors on TLS range measurements and recorded intensity values. Another aspect was investigated in this paper regarding the effect of two distinct materials with different colors on taking actual linear measurements from the acquired point cloud data. Measurements were taken on different distance intervals and results show that different scanning materials of various colors produce point clouds of varying quality.

Keywords: Terrestrial Laser Scanning (TLS), Lidar, Target Color, Target Material.

4. Integration of Smart Urban Mobility Systems

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Abstract:

Mobility is the engine of urban life, which drives social and economic activities in cities to grow on a large scale. Mobility has played a key role in shaping the urban spaces of cities. In order to achieve the quality of life and sustainable development in cities, integrated and smart urban mobility must be included. Mobility directly affects the planning and design of cities' urban spaces network. Integrated and smart mobility systems are a major reason for facilitating access for citizens, goods, etc., and they appear in a distinctive way in the centers of developed cities. From this point of view, the research study aims towards how smart urban mobility systems integrate and formulate standards and indicators for evaluating the performance of integration. This study came as a result of the lack of a clear vision in our local studies of integrative ways of the mobility system in the network of urban spaces in cities, and in a manner that is compatible with human and social requirements: cultural, economic, and environmental. The research methodology is based on the deductive approach through the study of integrated urban mobility and its systems, the role of smart mobility in achieving integration and the comprehensive development of societies. Finally, the research reached a set of results, including the key indicators (KPIs) for evaluating the performance of smart urban mobility integration.

Keywords: (urban mobility, integrated mobility, smart mobility, Seamless Integrated Mobility).

BJAS-2304-1146

5. Applications and Analysis of Expert Systems: Literature Review

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Abstract :

Knowledge-based expert systems integrate a knowledge base and reducing computing technologies to improve and automate human activities. There are several reoccurring problems with the standard approach for developing knowledge-based expert systems that may prevent successful implementations. A knowledge-based expert system may not always work correctly if problems are discovered while the knowledge is still being gathered. Furthermore, once a knowledge-based expert system is in place, it could be difficult to maintain it with the necessary time and resources. A suggested approach for extending the lifecycle of knowledge-based expert systems can integrate a wide range of suggestions to produce a more efficient methodology. Although these techniques are frequently employed in other fields, knowledge-based expert systems have not generally adopted them during their lifetime. A container-loading knowledge-based expert system was utilized to test the principles in the suggested technique. The objective of this investigation is to study the contributions made to improving the lifetime of knowledge-based expert systems.

Keywords: Knowledge-based Expert System, Knowledge Base, Inference Engine

BJAS-2304-1154

6. Thermal Performance of Solar Collector System Integrated with Heat Exchanger Immersed in PCM

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Abstract :

In the present work, solid liquid phase change heat transfer was studied experimentally for paraffin wax as a thermal storage material used in storage unit (water flow through the fin and tube heat exchanger immersed in 15kg of paraffin wax as a PCM), Solar water heating system integrated with the thermal storage unit to evaluate the thermal performance and thermal efficiency of a solar collector system which depends on the solar radiation, ambient temperature, water flow rate and orientation of heat exchanger at daylight and night. The experimental work was carried out in the Faculty of Engineering, Benha University, Egypt, which located at latitude and longitude angle of 30.466° N and 31.185° E, respectively. The obtained results showed that, The maximum outlet water temperature 90°C in summer season and minimum outlet water temperature 55°C in winter season, Also the difference between outlet water temperature and ambient air temperature varying between 40°C and 50°C , and temperature difference between outlet water and PCM 15°C at steady state, while the average PCM instantaneous heat gain in vertical case for three different flow rates reach 150 W at steady state which higher than horizontal with 50 W, Finally the maximum overall efficiency value was 81%.

Keywords: Solar collector system; Heating water; Phase change material (PCM); Heat exchangers; Thermal efficiency; solar radiation.

BJAS-2303-1139

7. Thermal Combustion Characteristics of Stabilized Swirl Burner for Prevaporized Partially Premixed Flames

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Abstract :

This paper presents an experimental study to investigate the effect of burning a mixture of biodiesel/A-1 jet fuel in a combustion chamber on flame characteristics . WCOME was produced from raw waste cooking oil by transesterification process with the help of ultrasonicator to reduce the production time. Swirl burner was used for the formation of central recirculation zone with Swirl number (SN) equal 0.55 , and the flame was stabilized using a swirl burner . Delivery air supplied was preheated to a constant temperature of 250 °C and mixed with prevaporized fuel at equivalence ratio ϕ of 0.75 for all tested fuel blends. The B5 and B10 mixture (5% and 10 vol% biodiesel with Jet A-1) are pre-evaporated and pre-mixed with air before being fed into a cylindrical combustion chamber of inner diameter (D = 150mm) and length (L = 500mm). The temperature of the premixed fuel/air mixture entering the combustion chamber is kept constant at 250 °C with equivalence ratio $\Phi = 0.75$ (lean conditions) for all tested conditions. The effects of excess air ($\lambda = 33\%$) , equivalence ratio ($\phi=0.75$) and , preheated air temperature ($T \geq 250\text{ }^{\circ}\text{C}$) , prevaporized fuel with fuel nozzle (0.5 gph and 30°) and preheated air swirled are constant for each tests.

Keywords: Thermal combustion, stabilized swirl, Prevaporized Partially Premixed Flames.

BJAS-2304-1149

8. Biophilic Design and Psychological Satisfaction for Oncology Hospital Patients

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Abstract:

The psychological satisfaction of cancer patients is an important and effective role in the completion of the therapeutic process. Hospital design certainly plays an active role in contributing to the achievement of psychological satisfaction, but we note that there is a lack of attention to this important aspect when designing hospitals in general and designing oncology hospitals in particular. Psychologists and designers assert that trying to provide a good environment for cancer patients results in countless benefits. The application of biophilic strategies and the linking of the internal environment of nature transforms it into a renewable and inspiring place that helps to improve health, raise mental state, recover, improve relationships, and foster a sense of psychological satisfaction, happiness, and harmony. The research aims to achieve the psychological satisfaction of cancer sufferers by integrating and coexisting with nature's components, and this is achieved using biophilic design patterns. According to TBG Terrapin Bright Green, as part of their efforts to identify biophilic design elements they have developed 14 patterns of biophyllic design, they can be divided into three main categories of how to integrate biophilic design into the urban environment: (Nature in the vacuum - Models corresponding to nature - Nature in the vacuum), Many hospitals around the world have used biophilic design patterns to upgrade the quality of their hospitals. Patients flock to these hospitals from around the world for treatment. The research explores the difference between following biophilic design patterns or simply using hospital design foundations.

Keywords: Biophilic Design, Oncology Hospital, Psychological Satisfaction

9. Recent Studies and A Review About Malware Detection and Classification by Using Artificial Intelligence Techniques

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Abstract :

Due to the harmful and dangerous widespread usage of Malware crisis as a result of numerous sorts of malware, dangerous programs, and scripts that are available on the vast virtual world known as the Internet. This survey focuses on learning about most recent various types of malware and methods to get rid of them by locating them and kicking them out of the system, which isn't easy because these small pieces of script or code can be found everywhere in the user system. In this paper, we highlight malware collection, aggregation, and dissemination challenges in user system environment and present a comprehensive discussion on the recent studies that utilized various AI methods to meet specific objectives of most malware detection systems, from 2017 to 2022. We compare and contrast different algorithms based on optimization criteria, simulation, real deployment, malware types, and performance parameters. We conclude with possible future research directions. This would guide the reader towards an understanding of up-to-date applications of ML methods concerning malware recognition, aggregation, and dissemination challenges. Then, we provide a general evaluation and comparison of different ML methods used, which will be a guide for the research community in identifying the most adapted methods and the benefits of using various AI and machine learning methods for solving the challenges related to getting rid of these harmful malwares. Finally, we conclude the paper by stating the open issues of research and new possibilities for future studies.

Keywords: deep learning, machine learning, malware and software defined networking

10. Impact of Public Spaces Deformation on Walkability as One of The Rights of Use in Heliopolis.

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Abstract :

In 2019, Cairo had some urban changes that affected its public spaces. Research calls this change public spaces deformation. At the time of the launch of "Egypt Vision 2030" for sustainable development, there were interventions in Heliopolis public spaces, where urban changes were imposed on the entire region. Changes were transforming streets into car roads, replacing squares with car bridges, removing some green Central Islands, and narrowing some sidewalks. As a result, there were difficulties in accessing public places, physical activities, and walkability in public spaces. The research aims to study the impact of the deformation of public spaces in Heliopolis on walkability as one of the rights of use. A literature review of the study identifies characteristics of pedestrian infrastructure identified the criteria of the Global Walkability Index to review pedestrian infrastructure characteristics in urban space after deforming. Three case studies have been selected in Heliopolis to evaluate using observation and imaging tools. Results showed that pedestrian network infrastructure standards in the Heliopolis area were affected by deforming urban spaces that gave more space to cars at the expense of the safety and comfort of pedestrians.

keywords: Public space, public spaces deformation, walkability, pedestrian infrastructure.

BJAS-2303-1140

11.A Survey on Personalization of Diabetes Treatment using Artificial Intelligence Techniques

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Abstract :

Diabetes mellitus is a disease caused by uncontrolled diabetes that can lead to multiple organ failure in patients. Thanks to advances in artificial intelligence, the diagnosis and early detection of diabetic disease is possible. Many articles are currently being published on the use of artificial intelligence and machine learning techniques for automated detection, diagnosis, and personalized treatment and management of diabetes. This survey analyzed technologies for the personalized treatment of diabetes from five different perspectives: blood glucose prediction, Glycemic variability detection, Hyperglycemia detection, Insulin controller therapy, and Pharmacogenetics. Diabetes treatment depends on medical, demographic, and lifestyle parameters. These parameters included diabetes type, age, body weight, duration of diabetes, comorbidities, blood sugar, physical activity, and diet. Artificial intelligence is considered a useful technology to support diabetes treatment. This survey provides a detailed overview of Diabetes detection and personalized treatment techniques which may be very useful to the community of scientists in automatic Diabetes detection and personalized treatment for diabetes.

Keywords: Artificial Intelligence; personalized Treatment; Machine learning; diabetes.



Scientific Sessions

Topics of Veterinary Medicine Science

BJAS-2303-1126

1. Ginger and Atorvastatin Attenuates Diazinon Induced Nephrotoxicity

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Abstract :

Diazinon (DZ) is an organophosphorus class II pesticide that is broadly used in agricultural fields and household environments. Ginger (GE) and Atorvastatin (AT) have been shown to have potent anti-oxidative, anti-inflammatory, and anti-apoptotic properties in some animal models of toxicity. Here, we investigated the protective properties of GE and AT on DZ-induced renal damage in rats. Total of seven rat groups (7 rats/group) received saline solution (control), ginger (GE), Atorvastatin (AT), Diazinon (DZ), DZ/GE, DZ/AT and DZ/GE/AT through gavage once per day for 30 days respectively. Blood were collected and sera were separated for analysis of kidney failure parameters (Urea and Creatinine). Anti-oxidation parameters were also measured in all the kidneys. Histopathology and IHC of cleaved caspase 3 were also performed on the renal tissues of different groups. Our results showed that GE and AT attenuated DZ-induced renal damage by reduction of malondialdehyde (MDA) and apoptotic (cleaved caspase-3) markers and improving the level of antioxidants and histological picture. Overall, the protective effects of GE and ATR on DZ-induced nephrotoxicity was prominent in DZ intoxicated rats co-treated with one or both compounds and this could be attributed to their potent antioxidative, anti-inflammatory and antiapoptotic properties.

Keywords: Kidney, Ginger, Atorvastatin, Diazinon, Nephrotoxicity, Antioxidants.

BJAS-2303-1134

2.The bioefficacy of Essential Oils against the False Stable Fly, *Muscina stabulans* (Harris) (Diptera: Muscidae).

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Abstract :

The false stable fly, *Muscina stabulans* (Diptera: Muscidae) is a cosmopolitan fly with a worldwide distribution and has medical and forensic importance acting a mechanical disease vector and intestinal myiasis producing fly. Control of *M. stabulans* is very rare; therefore, this study investigated some biological aspects post treatment of four essential oils through ingestion and contact bioassays against the 3rd larval instars of *M. stabulans*. After treatment with 50%, the mortality % of larvae, pupae, larvae and pupae, and adults reached 83.33, 73.33, 95.56, and 100%, respectively for *Apium graveolens* (celery); 73.33, 75.00, 93.33, and 100.00%, respectively for *Eruca vesicarica* (Ruca); 80.00, 100.00, 100.00, and 100.00%, respectively for *Lactuca sativa* (lettuce); and 63.33, 81.82, 93.33, and 90.00%, respectively, for *Raphanus sativus* (radish).The pupation and adult emergence rates as well as LC₅₀ values were 4.44, 0.00, and 21.743%; 6.67, 0.00, and 24.786%; 0.00, 0.00, and 20.909%; and 6.67, 10.00, and 31.826%, respectively. On the other hand, their toxicity indices reached 96, 84, 100, and 66%, respectively. This study indicated that *L. sativa* was the most effective oil, followed by *A. graveolens* and *E. vesicarica*; whereas *R. sativus* was the least effective oil. To conclude, essentials oils could be used as ecofriendly fly management in organic farming and in places where conventional insecticides could not be applied.

Keywords: Ingestion bioassays; *Apium graveolens*; *Eruca vesicarica*; *Lactuca sativa*; *Raphanus sativus*; toxicity indices.

3. Organochlorine Residues in Fish in Rural Areas

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Abstract :

A total of 45 samples of fish (Tilapia and Claris and Bahr Shibin) were collected from EL-Bagoria canal and EL-Menofi drainage and Bahr Shibin for detection and determination of Organochlorine pesticides (DDT, aldrin and dieldrin). Organochlorine pesticides could not be detected in Bahr Shibin while mean value of DDT in Tilapia from EL-Bagoria canal 0.37 ± 0.09 , aldrin 0.33 ± 0.03 and dieldrin 0.50 ± 0.20 while in EL-Menofi drainage mean level of DDT 0.34 ± 0.07 , aldrin 0.40 ± 0.08 and dieldrin 0.40 ± 0.13 . while in Claris samples from EL-Bagoria canal mean level of DDT 0.40 ± 0.46 aldrin 0.25 ± 0.07 and dieldrin 0.34 ± 0.08 while from EL-Menofi drainage mean value of DDT 0.27 ± 0.05 , aldrin 0.30 ± 0.07 and dieldrin 0.48 ± 0.10 . . while in Claris samples from EL-Bagoria canal mean level of DDT 0.40 ± 0.46 aldrin 0.25 ± 0.07 and dieldrin 0.34 ± 0.08 while from EL-Menofi drainage mean value of DDT 0.27 ± 0.05 , aldrin 0.30 ± 0.07 and dieldrin 0.48 ± 0.10 . Pesticides are one the main contaminant of water sources which are considered the natural environment of fish . on the other hand , fish could be contaminated by pesticides either directly by gills breathing or indirectly through contamination of feeding items, so it is very important to analyze fish samples to detect to what extent the rate of accumulation of pesticides residues in fish flesh and organs.

Keywords: Organochlorine, DDT, aldrin , dieldrin, HPLC.

4. Insect Growth Regulator Tolerances and Biochemical Characterization in *Culex pipiens* (L.) Mosquito

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Abstract :

Culex pipiens is an important vector in Egypt. The efficacy insect growth regulators (IGRs) on 4th instar larvae of *Cx. pipiens* collected from Faqous region, Sharkia Governorate, Egypt, was evaluated. The tolerance levels of such insecticides in comparison with a laboratory strain and their biochemical characterization were determined. The data indicated that LC₅₀ values post treatment (PT) of the field strain with Diflubenzuron, Novaluron, and Lufenuron were 0.08, 0.60, and 0.16 µg/ml, respectively. whereas the corresponding values for the laboratory stain were 0.07, 0.16, and 0.02 µg/ml, respectively. The relative tolerances of the filed strain reached 1.14 (low), 3.75 (medium), and 8.00 (high) folds, respectively, when compared to the laboratory strain. PT with Diflubenzuron, Novaluron, and Lufenuron and those of laboratory strain showed that the total protein levels were 17.00, 20.00, 27.33, and 13.33 mg/ g.b.wt, respectively, and the target enzyme of acetylcholine esterase, AChE, were 210.00, 283.33, 310.00, and 225.00 AChBr/min./g.b.wt, respectively. Their effect on the detoxifying enzymes reached 242.00, 386.67, 483.33, and 235.00 µ Meb min⁻¹ mg⁻¹ protein, respectively, for carboxylesterases; 28.00, 35.67, 62.33, and 22.00 µmol min⁻¹ mg⁻¹ protein for glutathione-S- transferase; 560.00, 723.33, 921.67, and 503.33 ηmol min⁻¹ mg⁻¹ protein, respectively, for α – esterase; and 128.33, 151.67, 175.00, and 131.67, ηmol min⁻¹ mg⁻¹ protein, respectively, for β – esterase. The tolerance levels for the applied IGRs revealed that the field strain form Faqous region was highly tolerant to lufenuron, followed by Novaluron and Diflubenzuron; therefore, Diflubenzuron is the IGR of choice to be applied in such area.

Keywords: General esterases, Acetylcholineesterase, glutathione-S- transferase, Carboxylesterases, total protein.

5. Studies on Pesticides Residues in Fish in Menofia Governorate

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Abstract :

A total 90 samples of fish (each 45 samples of Tilapia and Claris) were collected from EL-Bagoria canal, EL-Menofi drainage and Bahr Shibin in Menofia governorate and analyzed to detect and determine Organochlorine (DDDT, aldrin and dieldrin) and organophosphorus (diazinon, Malathion and chlorpyrifos). Organochlorine and organophosphorus pesticides could not be detected in Bahr Shibin while mean value of DDT in Tilapia from EL-Bagoria canal 0.37 ± 0.09 , aldrin 0.33 ± 0.03 and dieldrin 0.50 ± 0.20 while in EL-Menofi drainage mean level of DDT 0.34 ± 0.07 , aldrin 0.40 ± 0.08 and dieldrin 0.40 ± 0.13 . while in Claris samples from EL-Bagoria canal mean level of DDT 0.40 ± 0.46 , aldrin 0.25 ± 0.07 and dieldrin 0.34 ± 0.08 while from EL-Menofi drainage mean value of DDT 0.27 ± 0.05 , aldrin 0.30 ± 0.07 and dieldrin 0.48 ± 0.10 . No diazinon in Tilapia from EL-Bagoria while mean level of Malathion 5.50 ± 2.0 , mean level of chlorpyrifos 5.0 ± 1.66 . while from EL-Menofi drainage mean level of diazinon 3.33 ± 0.65 , mean level of Malathion 4.98 ± 1.22 mean level of chlorpyrifos 3.0 ± 0.71 . while in Claris samples from EL-Bagoria there were no diazinon, no Malathion no chlorpyrifos while from EL-Menofi drainage, mean level of diazinon 6.8 ± 1.42 , mean level of Malathion 4.64 ± 0.81 and mean level of chlorpyrifos 4.0 ± 0.96 . Pesticides are one the main contaminant of water sources which are considered the natural environment of fish. On the other hand, fish could be contaminated by pesticides either directly by gills breathing or indirectly through contamination of feeding items, so it is very important to analyze fish samples to detect to what extent the rate of accumulation of pesticides residues in fish flesh and organs.

Keywords : Organochlorine pesticides, DDT, aldrin, dieldrin, organophosphorus pesticides, diazinon, Malathion, chlorpyrifos, HPLC.

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