

Abstract of oral and poster presentations of the 2nd University Research Day of Bangabandhu Sheikh Mujib Medical University, 2019

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Abstract for Oral Presentation

O-1: Arsenicosis: A 25 years' experience

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Abstract

Arsenic is a naturally occurring metalloid component (atomic weight 74.92) that develops a poisonous effect (e.g. arsenicosis) on human body through groundwater. The concentration of arsenic may be higher in certain geographical regions and the dissolution of arsenic from arsenic-rich rocks and minerals contaminates the groundwater and soil by oxidation and reduction processes. The use of herbicides, fungicides, pesticides, mining activity, etc are further contributing. Arsenicosis has become a worldwide health problem. It was first identified in Cordoba of Argentina and now-a-days, at least 140 million people in 50 countries have been drinking water containing arsenic at levels above the WHO provisional guideline value. In Bangladesh, it was first reported in Chapai Nawabgonj district in 1993 and out of 64 districts, 60 districts are affected by high concentration of arsenic in drinking water that may cause arsenicosis. It presents with various cutaneous and systemic manifestations such as raindrop pigmentation, arsenical keratosis, blotchy pigmentation of buccal mucosa, leg edema, neuropathy, and anemia. It also causes premalignant and malignant skin cancers. Treatment including the prevention of further exposure, antioxidant supplement and management of complications can be successful in controlling arsenicosis.

O-2: Renal transplantation: Our journey

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Abstract

The aim of this study was to share the experience, outcome and future plan to overcome the hurdles of renal transplantation in Bangladesh. A total of 545 participants who received living related renal transplantation of which 10 were pediatric renal transplantation in this department since July 2011 were retrospectively reviewed. The donor and recipient were selected on the basis of HOTA, 1999 and amended 2018. Following an initial assessment, the donor and recipient were fit for safe surgery. After taking all preoperative preparation, a pre-transplant board meeting was arranged and then institutional ethical committee approval for proceeding transplantation was achieved. The mode of transplantation was only live related as cadaver transplantation not yet started. A better functioning kidney of the donor and transplant to the recipient at the right iliac fossa was preserved. Finally, preoperative, peroperative and postoperative data were recorded if any complication arises. Among the 162 cases, the success rate was 96% and one-year survival rate was 90 % which was comparable to any high volume center. Although the treatment outcome depended on many factors like HLA matching, complications of immunosuppression, acute and or chronic rejection, surgical technique and its complications, no major complication occurred in case of donor. However, venous thrombosis (n=4), lymphocele (n=2), acute rejections (n=8), urinary leakage (n=1) and lymphorrhoea (n=4) developed in case of recipients. Six cases developed infection, 4 cases needed graft nephrectomy, 1 reteroneocystostomy, 2 marsupialization of lymphocele and others managed conservatively. In conclusion, the outcome of renal transplantation at this department is excellent and cost-effective.

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O-3: Flow cytometric immunophenotyping of clinically diagnosed chronic lymphocytic leukemia among Bangladeshi

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Abstract

This study aimed to evaluate the application of multiparametric flow cytometry (Beckman coulter cytomics FC500) immunophenotyping for confirmation or exclusion of chronic lymphocytic leukemia diagnosis in clinically suspected patients. Four color flow cytometry immunophenotyping methods was used in EDTA peripheral blood samples taken from 25 consecutive patients diagnosed preliminarily as chronic lymphocytic leukemia through clinical data, complete blood count, peripheral blood film and bone marrow examination. The following fluorescent monoclonal antibodies were used: CD19, CD5, CD20, CD22, CD23, CD79b, CD79a, FMC7, Kappa and Lambda light chains, CD200, CD123, CD10, CD11c, CD3, CD7, CD25, CD30, CD56, CD95, BCL2, CD34. Marker of immaturity CD34 was added to exclude blast cells. Appropriate isotype control studies to determine background fluorescence were also used. Among 25 patients, 4 showed normal T-cell population (CD3+, CD5+, CD7+), while 21 showed pathological B-cell lines. From these, 16 of 25 patients expressed typical chronic lymphocytic leukemia markers (CD19+, CD5+, CD23+, FMC7-, Kappa or Lambda light chain restriction) whilst 5 of them showed B-cell prolymphocytic leukemia profile (CD19+, CD5+/-, CD23-, FMC7+, Kappa or Lambda light chain restriction). CD200 was expressed in all chronic lymphocytic leukemia patients but not in B-cell prolymphocytic leukemia cases ($p > 0.05$). In conclusion, flow cytometry immunophenotyping is a fundamental laboratory method without which a final diagnosis of chronic lymphocytic leukemia can't be established. CD200 could be useful in distinguishing between chronic lymphocytic leukemia and B-cell prolymphocytic leukemia cases.

O-4: Dengue outbreak in 2019: Clinico-biochemical profile of 240 cases

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This study was performed to document the clinic-biochemical profile of the patients admitted into the Dengue Cell Unit. A total of 240 serologically confirmed (either by NS1 antigen or IgM antibody) cases of dengue patients were enlisted in a purposive sampling method. History, clinical examination findings and biochemical reports were documented. Out of 240 patients, the findings are as follows: 65% male and 35% female, mean age 31 years; 26% students, 34% service holder, 19% housewife, 10% businessman, 11% involved in other jobs or retired; 32% came from outside Dhaka; 85% presented with fever and bodyache or joint pain and remaining had only fever as the first presentation; 97.5% had high-grade fever (highest 103⁰ F); bodyache (96%), joint pain (52%), rash (7%), retro-orbital pain (25%), headache (70%), fatigue (29%), breathlessness (3%), anorexia (42%), nasal stuffiness (6%), cough (18%), nausea (72%), vomiting (63%), abdominal pain (41%), loose stool (58%) and bleeding from different sites (25%); per-vaginal bleeding (34%), gum bleeding (27%) and hematemesis/melena (25%); 19% ascites, 16% pleural effusion. The rash was present in 26% patients. 165 patients had a platelet count lower than or equal to 50,000 (lowest 2,000) and 20 patients had 10,000 or less number of platelets; 112 (46%) suffered from dengue hemorrhagic fever, 26% had significant (>20%) rise/fall of hematocrit. Except 5 patients, all of them got intravenous crystalloid, 13 received platelet transfusion, 12 received the whole blood transfusion, 4 received antibiotic, 5 shocked patients managed with crystalloid fluid and had complete recovery. In conclusion, dengue in this 2019 outbreak presented with high fever and a substantial number of patients had low platelet count. Fluid management with crystalloid was sufficient in the majority of cases and a few patients received blood or blood products.

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O-5: Role of gynocular guided punch biopsy and cold coagulation in VIA positive cases

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Abstract

The aim of this cross-sectional study was to screening and detection of cervical intraepithelial neoplasia (CIN) by VIA using gynocular guided punch biopsy and cold coagulation in VIA positive cases in the same sitting for treatment of CIN-I, which can reduce the tertiary access related sufferings. The study was conducted in two Upazilla Health Complexes (Ramgorh and Mohalchari) of Khagrachory District. When VIA test was positive, participants were examined by gynocular (handy colposcope) and punch biopsy taken from colposcopically suspected CIN for histopathology. Suspected CIN-I cases were treated with cold coagulation in the same setting and CIN-II or above were referred to Chittagong Medical College Hospital for standard colposcopy and biopsy. In total, 665 and 525 patients were screened by VIA in Ramgorh and Mohalchari UHC, respectively. Nine cases were VIA positive in both Ramgorh (1.4%) and Mohalchari (1.7%). In Ramgorh, one cervical cancer was found. Among 09 VIA positive cases, normal (2), CIN-I (6), CIN-II (1) and in Mohalchari normal (1), CIN-I (8) were found by gynocular. Finally, in Ramgorh CIN-I (4), chronic cervicitis (2) and squamous metaplasia (1) and in Mahalchari CIN-I (2), CIN-II (1) and chronic cervicitis (6) cases were confirmed by histopathology. Altogether 57% cases in Ramgorh and 37.5% in Mohalchari were correctly diagnosed and treated (CIN-I) using gynocular and cold coagulation in the same setting. In conclusion, gynocular guided punch biopsy and cold coagulation in VIA positive cases at the Upazilla level can reduce mortality due to cervical cancer and can prevent tertiary access related patients sufferings.

O-6: Association of NRF2 gene mutation with hepatocellular carcinoma in Bangladeshi patients

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Abstract

This case-control study was performed to observe the association of Nrf2 gene mutation in 28 hepatocellular carcinoma patients and 27 control patients (non-hepatocellular carcinoma patients) from fine needle aspirate of hepatic space occupying lesion from November 2018 to September 2019. The mutation of Nrf2 gene was examined by PCR, followed by DNA sequencing. Four mutations were found in 4 different hepatocellular carcinoma patient tumor tissue samples (14.3%) and no mutation was found in the control sample. It was found that 2 samples with substitution mutation (c. 839A>T, c. 851C>A) of N-terminal region of NFE2LE gene. Due to these substitution mutations, amino acids are also substituted from glutamic acid→valine and serine →threonine residue respectively. These substitution mutations were nearly close to ETGE motif. The deletion mutation in 2 samples was also observed where both the sample deletion of adenine occurred at nucleotide position 687 (c.687delA). These deletion mutations were between DLG and ETGE motifs. As DLG and ETGE motifs are associated with the regulation of Nrf2 transcription factor, mutation in N-terminal region of DLG and ETGE motifs may cause aberrant activation of Nrf2, which ultimately leads to liver cancer. In summary, these findings reveal that mutation in Nrf2 serves as a key driver in hepatocellular carcinoma.

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O-7: Astrocyte elevated gene 1 expression in adults with newly diagnosed type 2 diabetes mellitus

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Abstract

Type 2 diabetes mellitus is the most heterogeneous form of diabetes which is caused by complex interactions between genetic and environmental factors. This study aimed to examine the correlation of AEG-1 gene expression in peripheral blood monocytes with type 2 diabetes on 17 newly diagnosed T2DM patients. Sixteen healthy nonglycemic control subjects of Bangladeshi origin without any current treatment regimen were included as control. The peripheral blood monocytes were sorted from the whole blood and the RNA was extracted followed by Q-RT PCR analysis to study the gene expression patterns. This study suggests that AEG-1 gene expression in peripheral blood monocytes of newly diagnosed patients with type 2 diabetes was significantly higher than the control subjects. AEG-1 gene expression was positively correlated with BMI index and increased level was observed in patients with BMI index of 30 or more. In conclusion, this study indicates that elevated expression of AEG-1 gene is a novel risk factors for type 2 diabetes.

O-8: Patterns and consequences of post-chikungunya arthritis

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Abstract

Chikungunya infection can lead to development of nonspecific post-viral arthritis, rheumatoid arthritis, spondyloarthritis and other non-inflammatory musculoskeletal complaints like persistent arthralgia. This longitudinal study performed to identify the clinical patterns and consequences of post-chikungunya arthritis in Dhaka in 2017. One hundred and forty-two IgM and/or IgG positive patients were included in the study for the next one year follow-up. The clinical, laboratory and musculoskeletal ultrasonographic features, X-ray sacro-iliac joint etc. were evaluated. Functional status was assessed by Health Assessment Questionnaire (HAQ). The mean age of the patients was 43.1 ± 10.9 years; 72 (50.7%) were male and 116 (81.7%) urban resident. Ninety-six patients (69.7%) had polyarthritis whereas 36 (25.4%) had oligoarthritis in the acute and subacute stage. Symmetrical joint involvement was present in 120 patients (84.5%). The musculoskeletal ultrasonographic findings of 32 patients showed that tenosynovitis, tendinitis and synovial hypertrophy were found in 24 (75.0%), 6 (18.7%) and 4 (12.5%) patients, respectively. Chronic chikungunya arthritis developed in 59 (41.5%) patients. Among them, 35 (59.3%) patients were not labeled in any particular pattern but eventually developed undifferentiated arthritis (UA) whereas 8 (13.5%) had rheumatoid arthritis and 16 (27.1%) had spondyloarthritis. At the end of 12 months, among 27 patients with persistent disease, 10 (21.7%) had monoarthritis, 14 (30.4%) oligoarthritis and 3 (6.5%) polyarthritis. Mild, moderate and severe functional disability was present in 42 (89.4%), 3 (6.4%) and 2 (4.3%) patients, respectively. Twelve patients were dropped out at the end of one year. In conclusion, chronic arthritis is frequent in chikungunya infection.

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O-9: Prevalence of child maltreatment in autism spectrum disorder in Bangladesh

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Abstract

Children with developmental disorders are at an increased risk of maltreatment. This cross-sectional study was performed to estimate the prevalence of different forms of maltreatment among children with autism spectrum disorder from November to December 2018. In total, 58 parents having autism spectrum disorder children of 2-17 years were interviewed using ISPCAN Child Abuse Screening Tool-Parent version. Among all respondents, 57 were mothers and one father. Approximately 85% of the children were male, and the rest were female where the median age was 6.5 years. All the children were found to have experiences of physical and psychological abuse both during the past year and lifetime. However, neglect was reported a little less with 76% and 83% during the past year and lifetime respectively. The reported prevalence of sexual abuse was 3.4% in the past year and 6.9% during the lifetime. Although all parents followed positive upbringing practices like explaining, giving a reward for good behavior, etc., children were maltreated equally irrespective of gender ($p>0.05$). In conclusion, children with autism spectrum disorder in Bangladesh experience a high burden of maltreatment.

O-10: Leukocyte gene expression of myeloperoxidase and neutrophil elastase in cardiometabolic disorders

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Abstract

This study was conducted to explore the pattern of expression of neutrophil elastase and myeloperoxidase genes in peripheral blood leukocytes in overweight and obese subjects and in patients with coronary atherosclerosis. In the first phase, 74 participants were recruited and grouped as lean (BMI, 18.5-22.9 kg/m²; n=22), overweight (23.0-27.4; n=27) and obese (≥ 27.5 ; n=25). In the second phase, 64 were recruited who underwent elective coronary angiography and grouped as control ($<20\%$ stenosis; n=22) and coronary artery disease ($\geq 20\%$ stenosis; n=42) groups. Biochemical investigations were conducted and mRNA levels of neutrophil elastase and myeloperoxidase genes were quantified by real-time qPCR. The results of first phase showed that compared to the lean group, the overweight and obese groups showed significant up-regulation of both neutrophil elastase ($p<0.001$) and myeloperoxidase ($p<0.03$) mRNA expressions in peripheral blood leukocytes but no difference was found between the overweight and obese groups. The neutrophil elastase and myeloperoxidase mRNA levels showed significant positive correlation with BMI, serum triglyceride, atherogenic index of plasma and 10-year risk of developing cardiovascular disease. In the second phase, both the neutrophil elastase ($p=0.007$) and myeloperoxidase ($p=0.019$) gene expressions were found markedly elevated in the coronary artery disease group compared to the control group. Furthermore, both neutrophil elastase and myeloperoxidase gene expressions showed highly significant positive correlations with severity of coronary atherosclerosis (neutrophil elastase: $r=0.35$, $p=0.005$; myeloperoxidase: $r=0.33$, $p=0.008$). In conclusion, the neutrophil elastase and myeloperoxidase genes are significantly up-regulated in overweight, obese and coronary atherosclerosis participants and they may mechanistically related with the pathogenesis cardio-metabolic disorders.

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O-11: Frequency of discrepancy between bone marrow morphology and immunophenotype in acute leukemia

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Abstracts

Acute leukemias are a heterogenous group of hematological malignancy characterized by uncontrolled clonal proliferation of hematopoietic progenitor cells. The prospective type of observational study was conducted to see the frequency of discrepancy between the immunophenotype and bone marrow morphology in acute leukemia. A total of 38 untreated acute leukemia patients attending at the Department from October 2016 to September 2017 were included. At first, the morphological diagnosis was done. Then the immunophenotypic profile was compared. It was found that 81.6% cases of acute leukemia did find similarity with immunophenotyping. The remaining 18.4% shows discrepancy and their diagnosis was changes after immunophenotyping. Aberrant phenotypes were detected in 20 (52.6%) samples among them 13 (34.2%) cases were AML, 3 (7.8%) cases were B-ALL and 4 (10.5%) cases were T-ALL. Significant correlation was not found between aberrant marker and FAB subtypes. It can be concluded that in acute leukemia, morphological appearance of bone marrow does not always match with immunophenotyping. It is, therefore, imperative and absolutely essential to ascertain the lineage of leukemia by immunophenotyping before starting treatment.

O-12: Evolution of the stealth cranioplasty for adult Chiari malformation type 1

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Abstract

In the present study, 17 adult patients of Chiari malformation type 1 underwent posterior fossa decompression and stealth cranioplasty, following arachnoid preserving duraplasty and hexagonal tenting of the duraplasty with the cranioplasty (HTDC) for management of symptomatic adult Chiari malformation type 1 with syringomyelia. The symptomatic Chiari malformation type 1 adult patients (11 males, 6 females; age ranges of 22-42 years, mean age 30.47 years) presented with different neurological symptoms related to Chiari malformation and syringomyelia for 6 to 84 months (mean 27.7 months). The patients had syringes extending to different levels. All of the patients underwent posterior fossa decompression, arachnoid preserving duraplasty followed by stealth cranioplasty and hexagonal tenting of the duraplasty with the cranioplasty. They were followed up for a period of 7 to 72 months (mean 32.59 months). Of 17 patients, 13 patients improved according to Chicago Chiari Outcome Scale with score of 13 to 15, while 4 patients remained unchanged and there was no worsening. There was no complication related to Chiari surgery. All the patients had good re-establishment of cisterna magna. 5 patients had marked reduction of syrinx while 11 patients had moderate to mild reduction and 1 patient had no change of syrinx. None of the patients needed redo surgery. In conclusion, stealth cranioplasty is effective to manage both Chiari malformation type 1 and syringomyelia with single simple procedure.

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O-13: Identification of mutation in exon11 of *BRCA1* gene in Bengali Bangladeshi patients with breast cancer

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Abstract

The objective of this study was to identify mutation in exon11 of *BRCA1* gene in Bangladeshi breast cancer patients. Genomic DNA was extracted from the histopathologically diagnosed formalin fixed paraffin embedded (FFPE) breast cancer tissues of 65 adult female patients. Genomic DNA was extracted from 5 (10- μ m thick) sequential sections of FFPE breast cancer tissue using commercial DNA extraction kit QIAamp DNA FFPE tissue kit (QIAGEN GmbH, Germany). Two regions of exon11 of the *BRCA1* gene were amplified and the amplicons were sequenced using Sanger sequencing. The sequenced nucleotides were analyzed and blast using NCBI nucleoblast. Selected reproductive, lifestyle and medical histories were collected and analyzed using SPSS version 20. The mean age of the patients was 46 years and the mean age at diagnosis was 44.64 years. The patients were married and had 2.65 ± 1.22 children except one was nulliparous, the mean age of menarche was 12.67 years. All patients had children, breastfed the babies for an average of 1.5 years. Only 13.6% of the patients had hypertension and the rest had no co-morbidity. The family history for cancer (breast and other cancer) was negative. Three novel mutations were found in a patient. Two among the three mutant sequences had effect on amino acid coding (DNA sequence change g.852G>C and g.709G>A and amino acid changes p.Gln284His and p.Glu237Lys respectively). In conclusion, the mutations profile of whole *BRCA1* gene as well as other breast cancer susceptible genes and investigation of the reproductive and lifestyle factors of population is necessary to plan the future management of breast cancer.

O-14: Is superbug imminent? Findings of a retrospective study in Bangladesh

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Abstract

This retrospective study was conducted in the neonatal intensive care unit to determine the clinical features, bacteriological profile and antibiotic resistant pattern of isolates from blood culture in neonates and their outcome in terms of death. During the study period, culture proven sepsis was documented in 124 of 559 admitted patient. Majority were late onset sepsis (LOS) 113/124 (91.1%), remaining were early onset sepsis (EOS). *Acinetobacter* (46%) was found to be the most common organism in both early and late onset sepsis followed by *Klebsiella* (37.9%) and *E. coli* (6.5%). Most of the organisms were resistant to 1st and 2nd line antibiotics. Colistin exhibited the highest sensitivity (91% in EOS and 94% in LOS) followed by tazobactam-piperacillin (73% in EOS and 53% in LOS), and then ciprofloxacin (45.5% in EOS and 44% in LOS), netilmicin (73% in EOS and 41% in LOS) and imipenem (45.5% in EOS and 42% in LOS). The prevalence of MDR and XDR organisms were 77.4% and 51.6% respectively. When outcome was compared in terms of death between non drug resistance and MDR group, no death was documented among non-drug resistance ($p < 0.001$). Similarly death was significantly higher among XDR when compared with non-drug resistance counterpart ($p < 0.001$). Death among XDR was proportionately higher compared to those in MDR, but the difference was statistically insignificant (50% vs. 35.4%, $p = 0.07$). In conclusion, Gram negative bacteria, in particular *Acinetobacter*, *Klebsiella* and *E. coli* are the leading causes of drug resistant bacterial sepsis.

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O-15: Evaluation of the effects of lumbosacral corset on the patients with chronic nonspecific low back pain

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Abstract

A randomized clinical trial was conducted on 81 patients having chronic LBP were included according to the selection criteria. Out of them, 31 (38.3%) were male and 50 (61.7 %) were female in a ratio of 1: 1.61. The mean age of the patients in study was 41.65 ± 8.41 years. Female persons were affected in their earlier ages (between 30 and 45 years) than male. Most of the patients were house wives (54.3%). The patients were divided randomly into two groups by the way of lottery for the clinical trial. Group-A patients were treated with NSAIDs, activities of daily living instructions (ADLs) and lumbosacral corset and group-B patients were treated with NSAIDs and ADLs. The patients were followed up weekly for five weeks and significant improvement was recorded after the treatment in both the groups ($p=0.001$). In comparison between two groups, it was found that there was no significant improvement in pre-treatment, after 1st week and after 3rd week. A little bit improvement was found in group-A patients than group-B after 4th week ($p=0.06$). But finally, there was significant improvement in group-A than group-B patients after 5th week ($p=0.005$). So, it can be concluded that both the treatment is effective for the patients with chronic non-specific LBP. But the patient may be more benefited if lumbosacral corset is used as an adjunct to NSAIDs.

O-16: Evolution of mandibular reconstruction in Bangladesh

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Abstract

In the present study, reconstruction of the mandibular defect was managed with microvascular free flap in 2005 in the oral and maxillofacial surgery department. In this technique, the bone healing processes happened at the area of osteosynthesis between host and grafted bones by formation of callus as like as bone fracture site. Any large longitudinal defect, around 25 cm or more with adequate width and vertical height can be reconstructed by this method. Despite the fact that the technique is excellent for hard tissue defect reconstruction with maximum preservation of peri-mandibular soft tissue and not up to the mark for composite defect reconstruction, the usually created defects during the surgery of malignant lesion, particularly in oral cancer surgery. The reconstruction of composite defect with vascularised free composite flap, from the lower limb, particularly the fibula with skin paddle (osteocutaneous, osteomyocutaneous), where the bone defect is replaced by bone and peri-mandibular soft tissue defect either in oral cavity side or in outer surface of the face, or in both as per need for the anatomical restoration of any large defect, essentially important in T4 type oral cancer cases of oral and maxillofacial region. In conclusion, the continuous development of reconstructive surgery solved the problem related to anatomy with outstanding result, but oro-dental rehabilitation still challenging once the defect is large, especially in case of carcinoma/cancer surgery due to soft tissue balk and radiotherapy, and this dark phase of reconstructive surgery need to explore in the future.

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O-17: Comparative study of single fraction and multiple fraction palliative radio therapy for the treatment of bone metastasis in multiple center of Bangladesh.

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Abstract

The aim of this study was to compare the role of single fraction and multiple fraction radiotherapy in the management of metastatic bone pain. Every odd number of patients was taken in Group A and every even number patient was taken in Group B. Group A: patients were treated with single (8 Gy) fraction radiotherapy and Group B: patients were treated with multiple fraction (30 Gy) radiotherapy i.e.300 cGy per fraction in 10 fractions, 5days a week for two weeks by telecobalt or orthovoltage machine. The responses were as follows, complete response: absence of pain, partial response: decrease of pain. The response to radiotherapy was recorded at the end of treatment, 7days, 14 days, 21 days, 28 days and during the follow-up visits. The total number of 90 patients of metastatic bone disease was studied in two groups. Group A included 44 patients received a single fraction of 8 Gy tumor dose and Group B included 46 patients who received 30 Gy tumor dose in 10 fractions over two weeks. Onset of pain relief was 68% in Group A and 67.4% in Group B after completion of 4th week radiation. After 8th weeks of radiation 81.8% in Group A and 86% in Group B are relieved from pain. Complete response in Group A 45% and in Group B 52%, partial response in Group A 40% and in Group B 37% and overall distribution of no response in Group A 18% and in Group B 7%. In conclusion, for metastatic bone pain, single fraction palliative radiotherapy and multiple fractions palliative radiotherapy are almost same in efficacy.

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Abstract for Poster Presentation

P-1: Prevalence of musculoskeletal disorders in elderly population in a rural community of Bangladesh

Moinul Hasan, Zilan Miah Sarker, Mohammad Tanvir Islam, Shamim Ahmed

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Abstract

The descriptive cross-sectional study was performed to determine the prevalence of musculoskeletal pain and specific rheumatic disorders in the elderly population in a rural community of Bangladesh. A total 380 elderly people was subjected to modify community oriented program for control of rheumatic disorders (COPCORD) questionnaire to detect positive respondents and then Bengali version of health assessment questionnaire (HAQ) was used for assessing functional disability, standard criteria for diagnosing rheumatic disorders and clinical judgment for diagnostic problems. The results of prevalence of musculoskeletal pain were 52% (women 56.6%; men 43.4%), housewife (42%), retired person (24%), and cultivators (17%); low back pain (42.4%), knee joint pain (37.4%), foot pain (14.1%) and hand pain (12.1%). Other findings were non-specific low back pain (28.8%), osteoarthritis (26.3%), non-inflammatory pain (19.2%), soft tissue rheumatism (16.6%) and lumbar spondylosis (11.6 %). The prevalence of rheumatoid arthritis and frozen shoulder was 4% and 4.5%, respectively. It can be concluded that more than half of elderly population suffers from musculoskeletal pain disorder and functionally disabled. Women suffer more frequently than men, back and knee pain were the commonest sites of pain.

P-2: Frequency and severity of erectile dysfunction among hypertensive and normotensive married men

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Abstract

The aim of this cross-sectional study was to evaluate the frequency and severity of erectile dysfunction in hypertensive patients and compared the results with normotensive married men of similar demographic characteristics. This study included 75 hypertensive and 75 normotensive young and middle aged married men (31-59 years) and erectile dysfunction was evaluated with pre-validated Bengali version of the International Index of Erectile Function (IIEF-5) questionnaire. Erectile dysfunction was found in 61.3% of patients with hypertension compared to 37.3% of normotensive subjects. Furthermore, 5 (6.7%) hypertensive and 0 (0%) among normotensive had moderate to severe range (IIEF -5 score 7-12) of erectile dysfunction ($p=0.023$). In mild to moderate categories (IIEF -5 score 13-18) the hypertensive subjects had more erectile dysfunction ($p=0.045$) and mild range of erectile dysfunction (IIEF-5 score 19-24) had a non-significant ($p=1.00$) difference in between the groups. The normotensives had significantly much more number of subjects with no erectile dysfunction in comparison to hypertensive (47 vs 29) and p was significant (0.005). Hypertension duration, severity and age of the subjects were found to be positively correlated with erectile dysfunction. Hypertension was found 2 times more risk for erectile dysfunction comparing with non-hypertensive respondents (OR=2.017 with 95% CI 1.003-4.052) and it was concluded that blood pressure has a influence on the prevalence of sexual erection.

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P-3: Nutritional status and its association with cognitive level in children with autism in a developing country: Bangladeshi perspective

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Abstract

This cross-sectional study was conducted to describe the nutritional, economic and IQ levels of the autistic children in Bangladesh. A total of 384 children with autism (age 1-12 years) were enrolled in this study. Nutritional status was assessed by means of nutritional data, anthropometric data and providing a questionnaire to parents. The parents were asked to complete a questionnaire regarding the socio-demographic status. IQ assessment was done with Bayley Scales of Infant Development, Independent Behavior Assessment Scale or the Wechsler Intelligence Scale for Children-Revised. It was found that children with autism exhibited several abnormalities in terms of eating behavior. According to the anthropometric data, nutritional status of the ASD children is almost normal but malnutrition was also present in some ASD children and association between malnutrition and low IQ level was observed. In conclusion, various aspects of nutritional deficiencies were observed in autistic children and they also exhibited several abnormal eating behaviors. According to the anthropometric data, 23% of autistic children had low nutritional status. There was an association between poor nutritional status and low IQ levels among autistic children.

P-4: Correlation of serum S-100 protein level with severity of ischemic stroke

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Abstract

The aim of this cross-sectional study was to correlate serum S-100 protein level with severity of ischemic stroke. Seventy diagnosed patients of ischemic stroke from the Department of Neurology, BSMMU were enrolled in this study. Severity of ischemic stroke was assessed on the basis of NIHSS score during the period of September 2018 to August 2019. Serum S-100 protein levels were measured by electrochemiluminescence immunoassay (ECLIA) method. Thirty five (50.0%) patients had moderate stroke (NIHSS score=5-15), 17 (24.3%) minor (NIHSS=1-4), 12 (17.1%) moderate to severe (NIHSS=16-20) and 4 (5.0%) severe stroke (NIHSS=21-42). Mean level of S-100 protein was measured in different categories of severity of ischemic stroke. Highest value of serum S-100 protein was found in severe stroke (Mean \pm SD = 0.739 \pm 0.207 μ g/L; range=0.523-1.019 μ g/L) and it was found statistically significant (p<0.001). Spearman's correlation test revealed strong positive correlation (r=+0.943, p<0.001) between serum S-100 protein level and NIHSS scores of ischemic stroke patients. In conclusion, estimation of serum S-100 protein is a less hazardous blood based biomarker and serum S-100 protein level can be used as an important tool to predict severity of ischemic stroke.

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P-5: An assessment of response to steroid in Takayasu arteritis in Bangladeshi population

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Abstract

The aim of this study was to assess the remission rate with prednisolone in Takayasu arteritis in Bangladeshi population and to determine the characteristics in patients guide to choose initial induction therapy. Twelve consecutive active Takayasu arteritis patients who received 1 mg/kg prednisolone was included for this study. Disease activity was assessed by using the Indian Takayasu Activity Score- CRP (ITAS-CRP) and then reassessed after 1 month. Patients those were not in remission or relapse during tapering of the prednisolone, they received methotrexate and follow-up continues up to 12 months. After 1 month, 45.5% (CI:17.28-73.62) patients went into remission. 80% patients relapsed during tapering of prednisolone and 9.1% patients were in sustained remission with prednisolone. The relapsed rate of patients while on methotrexate during tapering of prednisolone was 20% (CI: 44.6-19.75). Those patients had onset of symptoms less than 15 months prior to onset of therapy and did not have syncope, stroke, TIA and complications like aortic regurgitation and hypertension responded to prednisolone. Presence of carotidynia ($p=0.03$) found as significant predictor for reappearance of pulse. In conclusion, the response to prednisolone is variable in different population of Takayasu arteritis. Proper identification of baseline factors in Takayasu arteritis might help physician to decide induction regimen: with prednisolone alone or combined with immunosuppressive.

P-6: Comparative study of adenosine deaminase level in cerebrospinal fluid of tuberculous and non-tuberculous meningitis patients

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Abstract

This cross-sectional observational study was performed on 40 tuberculous meningitis and 40 non-tuberculous meningitis (20 bacterial and 20 viral meningitis) patients admitted in the Neurology, Pediatric neurology and Internal medicine departments of BSMMU and DMCH. Sampling method was purposive and included both sex and all age groups. In tuberculous meningitis cases, CSF was analyzed for ADA, biochemical and cytological study; Gram, AFB and Indian ink staining; culture for bacteria, fungus, AFB and Xpert MTB/RIF. Non-tuberculous meningitis cases were subjected to CSF analysis for diagnostic purposes of bacterial or viral meningitis according to authentic diagnostic criteria. The mean CSF ADA activity was found to be significantly higher in CSF of tuberculous meningitis patients, 12.9 ± 9.2 U/L (6.2- 39.0 U/L), mean \pm SD with range, than in the CSF of non- tuberculous meningitis patients, 5.1 ± 3.0 U/L (2.7 -20.7 U/L); p value was <0.001 . A cutoff value of 9.35 U/L was used to differentiate tuberculous meningitis from non- tuberculous meningitis. The cut off value of CSF ADA 9.35 U/L was also found. Sensitivity and specificity of CSF ADA were 76.9% and 77.6%, respectively. In conclusion, ADA estimation in CSF is not only a simple, less expensive and rapid test but also fairly sensitive and specific method for making a diagnosis of tuberculous meningitis especially when there is a dilemma of differentiating the tuberculous meningitis from non-tuberculous meningitis.

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P-7: Association of murine double minute 2 (MDM2) gene polymorphism with hepatocellular carcinoma

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Abstract

In this study, the association of MDM2 gene polymorphism was analyzed in 62 Hepatocellular carcinoma (HCC) patients and 62 healthy controls. MDM2 gene polymorphism was determined by Polymerase Chain Reaction followed by Restriction Fragment Length Polymorphism (PCR-RFLP) method. The distribution of TT, TG and GG genotypes in 309 position of MDM2 gene was 24.2%, 41.9% and 33.9%, respectively among HCC group. In the control group, the distribution was 30.6%, 50.0% and 19.4%, respectively. The frequency of homozygous TT MDM2-SNP309 genotype was lower in HCC group in comparison to the control group (24.2% vs 30.6%), whereas the frequency of homozygous GG genotype was found greater in the HCC group in comparison to healthy controls (33.9% vs 19.4%). Multivariate logistic regression analysis showed that the Odds Ratios (OR) of the heterozygous TG and homozygous GG were 1.062 (95% CI= 0.452 – 2.496) and 2.217 (95% CI = 0.832 – 5.909, respectively, in comparison to homozygous TT genotype. No significant association was found between MDM2-SNP309 genotypes and hepatocellular carcinoma. In conclusion, increased frequency of homozygous GG MDM2 genotype was found in hepatocellular carcinoma patients.

P-8: Validity of antibody based tests for the diagnosis of acute phase of Chikungunya infection

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Abstract

This study aimed to find out the validity of the ICT in comparison to Polymerase Chain Reaction (PCR) in 102 cases of chikungunya fever attending the outpatient department from July to September 2017. Patients were advised to give blood sample in two phases: first within 7 days of fever or joint pain (acute) for qualitative Polymerase Chain Reaction (PCR) and ICT based IgM detection; second at second week of symptom appearance (convalescence) for IgM detection only. Out of 102 patients, 76 (74.5%) participants attended both phases and gave blood samples for both acute and convalescence phase. In acute phase, PCR was positive in 37 (48.7%) patients and only 9 (12%) had positive IgM antibody. The sensitivity and specificity of IgM test in acute phase sample was only 2.7% (95% CI, 0.1-14%) and 79.5% (95% CI, 63.5-90.7%), respectively. In convalescence serum, 58 (76.3%) samples were positive for IgM antibody. The sensitivity and specificity of convalescence IgM was 86.5% (95% CI, 71.2-95.5%) and 33.3% (95% CI, 19.1-50.2%). The overall prevalence of the disease in acute phase sample was 59%. In conclusion, antibody-based test is a good option for diagnosis of chikungunya infection in convalescence period.

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P-9: Evaluation of serum vitamin d level as risk factor for children with autism spectrum disorder

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Abstract

The aim of this study was to determine the association between serum vitamin D3 level and autism spectrum disorder in 68 diagnosed cases of autism spectrum disorder and 34 age matched control patients. The mean age of autism spectrum disorder patients were 47.6 ± 23.7 months and that was 46.6 ± 21.4 months in control group. Seventy nine percent patients were in less than 5 years age group in autism spectrum disorder patients and 82% in control group. There were 83% male patients in case group and 82% in control group. Male outnumbered female in both the groups. Male to female ratio was 5.1: 1 and 4.6: 1 in case and control group respectively. The mean serum vitamin D3 level was 23.8 ± 7.8 ng/mL in autism spectrum disorder patients and 26.7 ± 9.6 ng/mL in the control group and there were no significant difference between two groups ($p > 0.05$). In 73.5% autism spectrum disorder cases serum vitamin D3 level was below the normal level (less than 30 ng/dL) and that was 67.6% in control group. In conclusion, there is no association with serum vitamin D3 level and autism spectrum disorder in children.

P-10: Adverse childhood experiences and non-communicable diseases among adult in later life

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Abstract

The aim of this study was to measure the association between adverse childhood experiences and later age non-communicable diseases like hypertension, diabetes mellitus, obesity and dyslipidemia. In total, 277 respondents aged ≥ 40 years were selected randomly from Rasunia Union under Sirajdikhan Upazila, Munishiganj during January-December 2018. Adverse childhood experiences E questionnaire was used to measure the early childhood victimization experiences. A scoring system was developed based on responses to each victimization question of adverse childhood experiences and severity was estimated according to this scoring system. Socio-demographic and anthropometric data were collected. Patients with systolic blood pressure ≥ 140 and/or diastolic blood pressure ≥ 90 and/or antihypertensive drug were considered as hypertensive. Despite these, 5 mL of blood was collected and fasting blood sugar, serum total cholesterol, triglyceride, high-density lipoprotein and low-density lipoprotein were measured. The mean (\pm SD) adverse childhood experiences score of all respondents was 3.48 (0.46). Approximately 95% respondents had history of childhood psychological abuse, 86% physical abuse and 18.4% sexual abuse. Respondents who experienced multiple adverse events (≥ 4) during childhood showed higher rate of hypertension (OR 1.67, 95% CI 1.004, 2.781; $p = 0.047$) and higher body mass index (OR 1.066, 95% CI 1.017, 1.117; $p = 0.008$) during later life. In conclusion, participants who were exposed to multiple (≥ 4) adverse childhood experiences displayed a higher rate of hypertension and greater increase of body mass index levels in later life compared to their counterparts with ≤ 3 adverse childhood experiences.

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P-11: Evaluation of nasal carrier status of selected bacteria among health care providers and attendant mothers in a neonatal intensive care unit

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Abstract

The aim of this study was to determine frequency of nasal colonization of *Staphylococcus aureus* including Methicillin-resistant *S. aureus* (MRSA) and vancomycin-resistant *S. aureus* (VRSA) among health care providers and mothers/attendants of NICU of BSMMU during the period from July 2017 to December 2018. Inclusion criteria were a) all doctors, nurses and other staffs of NICU and mother/attendant caring the admitted newborn and b) consented to participate in the study. It was found that the methicillin resistant and vancomycin resistant strains were identified by oxacillin/cefoxitin and vancomycin disk diffusion methods respectively. The *S. aureus* carrier rate among health care workers and mothers/attendants was 18.4%. None of the study sample harbored MRSA or VRSA strain. The isolated organisms are least sensitive to commonly used oral antibiotics. The present study did not find any risk factors for colonization of *S. aureus*. Only one participant had isolate of *Acinetobacter* species. The participant belonged to mother/attendant category. Isolated organism was only sensitive to Colistin.

P-12: Female genital tuberculosis: Successful outcome of genital tuberculosis with infertile patients

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Abstract

The aim of this study was to assess the outcome of women with confirmed female genital tuberculosis who received antitubercular therapy. A total of 12 patients suffering from infertility were included. Among them, 5 with dysmenorrhoea and oligomenorrhoea, one pulmonary tuberculosis, one intestinal tuberculosis, one bone tuberculosis and one secondary amenorrhoea. Proper investigations of tuberculosis were done for identification of the primary source and then investigations were performed for genital tuberculosis by laparoscopy, hysteroscopy, PCR for *Mycobacterium tuberculosis* and histopathology. Hysterosalpingographic findings showed those 5 patients with bilateral tubal block, 1 unilateral tubal block, 2 hydrosalpinx (unilateral), 3 tubo-ovarian mass. Hysteroscopic findings were: uterine cavity small with adhesion present in 7 patients. The laparoscopic findings were a) tubal evaluation-5 beaded, 1 retort shaped, 1 tobacco pouch, 1 lead pipe; b) Tubo-ovarian mass-1-caseating material came after puncture. Three patients TB-PCR were positive, one of them endometrial histopathology was also positive and 9 patients were diagnosed by hysterolaparoscopic-picture alone. The outcome of 12 women treated with antitubercular drugs, 2 were conceived. In 1 patient, genital tuberculosis was diagnosed by PCR for mycobacterium tuberculosis and another patient was diagnosed by endometrial histopathology (tubercular granuloma positive). Among the 2 patient, 1 patient conceived following 4 months treatment of antitubercular drugs and another patient conceived 3 months after completion of antitubercular drug. Other patients are clinically improved (oligomenorrhoea, dysmenorrhoea). In conclusion, genital tuberculosis still a common health problem contributing to infertility in Bangladesh.

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P-13: Translation, cross-cultural adaptation and validation of the pain catastrophizing scale into Bengali in patients with chronic non-malignant musculoskeletal pain

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Abstract

This study aimed at translating and cross cultural adaptation of Pain Catastrophizing Scale (PCS) to Bengali and its validation in Bangladesh. Forward-backward translation was applied to translate the questionnaire from English to Bengali. Ninety-five patients suffering from chronic non-malignant musculoskeletal pain participated in the study. Reliability and validity were assessed using internal consistency and convergent validity respectively. Factor analysis was performed to examine the scale structure. The internal consistency for 'helplessness,' 'magnification,' 'rumination,' and 'total' of the Bengali PCS were Cronbach's α =0.87, 0.72, 0.90 and 0.92 respectively; test-retest reliability of the scale were ICC = 0.93, 0.79, 0.87 and 0.78 respectively. Moderate negative correlations were observed between the Bengali PCS and physical and psychological functioning. Factor analysis demonstrated the adequacy of the three-factor structure of the Bengali PCS; 'helplessness,' 'magnification,' and 'rumination.' It can be concluded that the Bengali version of PCS is a valid and reliable tool to measure pain catastrophization. The PCS scores in our population were found harmonious with the original scale and other available studies. This scale can now be used in our Rheumatology practices planning for therapeutic interventions who are suffering from chronic pain.

P-14: Challenges in tuberculosis service at primary health care setting, a mixed method study in Bangladesh

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Abstract

This study was aimed to identify the challenges in providing tuberculosis service at primary health care settings. This mixed-method study was conducted in 7 randomly selected Upazilla Health Complexes from two districts. Qualitative data were collected by using observation checklist, 12 in-depth interviews with the patients and 12 key informant interviews with the service providers, and analyzed with content analysis method. It was found that majority of the patient started symptomatic treatment (72.3%) with the help of village doctor or pharmacy shopkeeper before visiting registered physicians. Less than half (48.94%) of the patient reported that their treatment was directly observed as per guideline. The reason behind inadequate DOTS was found to be inappropriate patient demand, insincerity of the field level stakeholders, distance, and lack of incentive to the Directly Observed Treatment Short-course (DOT) provider. There was an apparent gap in the health education communicated with the patients such as cough etiquette and preventive measures. Some facilities were facing difficulties due to inadequate logistic supplies, especially drugs and sputum mug. In conclusion, tuberculosis service at primary health care settings faces a lot of challenges both in provision and procurement of care.

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P-15: Seroprevalence of cytomegalovirus among blood donors

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Abstract

This descriptive cross-sectional study was carried out from January 2015 to December 2015. A total of 150 blood donors were selected by convenient sampling technique. The seroprevalence of cytomegalovirus is 91% for IgG and 4% for IgM. Association was found in between IgG, age and sex. In case of age anti- Cytomegalovirus (CMV)-IgG, $\chi^2= 26.5$, $t = 9.49$; $\chi^2 > t$ (Association Exists), for sex anti-CMV-IgG: $df = 1$, $CI = 95\%$, $\chi^2= 17.8$, $t = 3.84$; $\chi^2 > t$ (Association Exists) Anti-CMV-IgM: $df = 1$, $CI = 95\%$, $\chi^2= 10.7$, $t = 3.84$; $\chi^2 > t$ (Association Exist). The incidence of cytomegalovirus is 91.3% for IgG and 4% for IgM. Most of the IgG positive subjects were in 38-47 years and for IgM were in 28-37 years. It was observed that seroprevalence of CMV was more in female (94.9% in case of IgG & 6.8% in IgM) and the highest prevalence of IgG was 3 out of 3 (100%) in illiterate and that of IgM was 1 out of 3 (33.33%) in illiterate level of education. It can be concluded that prospective blood donors should be screened for CMV most especially for immunocompromised recipients.

P-16: Etio-clinical profiles of pancreatitis in children

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Abstract

This descriptive cross-sectional study conducted to determine the clinical presentation and aetiology of pancreatitis in children from 1st January to 31st December, 2016. Seventy two subjects of pancreatitis (age of <18 years) were studied. Clinical characteristics, laboratory and imaging profile of subjects and etiologies, complications of pancreatitis were studied. Among 72 studied subjects (mean age 10.3 ± 3.7 years), 52.8% were male and 41.7% had acute, 26.4% had ARP and 31.9% had chronic pancreatitis. Common clinical features were: abdominal pain 100%, 52.2% and 78.9%; vomiting 74%, 26.5% and 84.2% in acute, chronic and ARP respectively. As mean \pm SD, serum amylase (U/L) was 1294.0 ± 2119.6 , 556.2 ± 882.8 and 1141.1 ± 2344.1 ($p=0.478$); serum lipase was 2093.2 ± 3034.5 , 1354.7 ± 2525.5 and 2340.2 ± 1902.2 ($p=0.480$) in acute, chronic and ARP respectively. USG studies revealed: swollen pancreas 26.4%, biliary tree abnormality 16.7%, ascites 5.6% and main pancreatic duct dilatation with stone 12.5%. MRCP and CT abdomen were done in 23 and 14 subjects respectively. Etiology of pancreatitis was: idiopathic 65.3%, tropical calcific pancreatitis 13.9%, hepatobiliary tract abnormalities 12.6%, biliary ascariasis 4.2% and acute hepatitis A 1.4%. In conclusion, abdominal pain is the most common clinical presentation of pancreatitis.

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P-17: Association of serum homocysteine level with migraine in adults

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Abstract

This case control study was conducted from April, 2017 to September, 2018. A total of 65 migraine and 65 headache other than migraine (control) patients, were subjected to estimation of serum homocysteine levels and other relevant investigations were performed in selective cases. Comparison of serum homocysteine levels between two groups were done to see association of serum homocysteine level with migraine in adults. The mean (\pm SD) serum homocysteine level in migraine group was $10.7 (\pm 4.2) \mu\text{mol/L}$ which is significantly higher than control group $7.6 (\pm 2.3) \mu\text{mol/L}$, ($p < 0.001$). The mean value of serum homocysteine level in migraine without aura patients was $11.9 (\pm 4.2) \mu\text{mol/L}$ was found significantly higher than migraine with aura patients $8.2 (\pm 1.5) \mu\text{mol/L}$, ($p < 0.05$). There was no significant correlation between severity of migraine headache and frequency of migraine attack with serum homocysteine level. In conclusion, serum homocysteine level was found significantly higher in migraineurs than non-migraineurs. Among the migraineurs, higher serum homocysteine level was found in patient's migraine without aura than in patients of migraine with aura. Severity and frequency of migraine attack were not affected by serum homocysteine level.

P-18: Comparison of serum magnesium level, platelet count and mean platelet volume between migraine and non-migraine headache patients

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Abstract

This cross-sectional study was conducted during the period from March 2018 to February 2019. A total of 30 migraine and 30 non-migraine headache patients were subjected to serum magnesium, platelet count and mean platelet volume measurements. The mean age of migraine and non-migraine was 30.6 ± 10.9 (age range: 15-60 years) and 28.9 ± 11.9 years (age range: 12-60 years), respectively. Female were more common in both groups; 1:9 and 1:2.8 respectively. The mean value of serum magnesium level, platelet count and mean platelet volume in migraine and non-migraine group were 1.66 ± 0.19 versus $1.9 \pm 0.2 \text{ mg/dL}$ ($p < 0.001$), 331.3 ± 63.8 versus $321.4 \pm 83.2 (\times 10^9/\text{L})$ ($p = 0.606$) and 10.4 ± 0.8 versus $9.5 \pm 1.1 \text{ fl}$ ($p < 0.001$), respectively. Odds ratio of hypomagnesemia was 32.7 and high mean platelet volume was 24.2. There is no significant relation between severity and frequency of migraine with serum magnesium level, platelet count and mean platelet volume. In conclusion, the severity of migraine headache and frequency of attack are not affected by magnesium level, platelet count and mean platelet volume. Hypomagnesaemia and high MPV act as suggestive risk factors for migraine.

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P-19: Lymphomatoid papulosis: A rare case of dermatology

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Abstract

Lymphomatoid papulosis is a rare cutaneous condition characterized by chronic, recurrent, and self-regressing papulonodular skin eruptions. The occurrence is 1.2-1.9 cases per 1 million population. Patients are at an increased risk of developing cutaneous or nodal lymphoid malignancies such as classic mycosis fungoides, ALCL, and Hodgkin lymphoma. Here, a case 48 year-old woman, admitted at the outpatient department on 31 July 2017 with the complaints of multiple erythematous painless, non-pruritic plaques and subcutaneous nodules over the right shoulder, both upper limbs, lower limbs, back and the abdomen for 4 months and a large ulcerated tumor over the medial aspect of left leg for 3 months. To the best of my knowledge, this is the first reported case of lymphomatoid papulosis from Bangladesh.