

## Editors Note

All of you are aware that “reflection” started with the idea that the staff of United Hospital will have a forum where all the great and small happenings taking place, professional or personal, will be shared within the fraternity.

Accordingly we shared the clinical articles and non-clinical write ups, proudly announced the various initiatives being taken, informed about businesses and corporate agreements, observation of international days like World Cancer Day, Nurses Day, World Kidney Day etc. We also informed you about collaboration agreements with other educational institutions as well as working together with regulatory bodies to propagate the upgradation of new technologies in the country.

The most awaited moments are the yearly picnics, sports and awards. The staff information section allows us to share the feelings with great pleasure when we get the news of the new borns, newlyweds and heartfelt condolences for those family members whose dear ones depart this world.

All this has been possible because of your contributions and creative articles making deadlines fly by. There have been times when we cajoled/ pushed you to provide contributions, there are few who spontaneously & jovially came forward with articles and others with anguish inquired why their articles were not published. There is also the team effort of the reflection associates who despite their own assigned responsibilities went two steps ahead to bring out the quarterly publications on time.

At the end of 2013 we feel confident that we will be able to continue our efforts with your support. We take this opportunity to express our profound appreciation and thank everyone who has contributed and we look forward to participation from all of you to enrich “reflection” in the coming year 2014.

## TrueBeam

*The Latest Technology for Cancer Radiation Treatment*

**Dr Ashim Kumar Sengupta**

As a comprehensive World Class Cancer Center, United Hospital has recently added, in addition to the existing Linear Accelerator, the latest technology for cancer treatment – **The TrueBeam System**.

The TrueBeam system (a radically different approach to cancer treatment) integrates and synchronizes performance of imaging and treatment technology, allowing faster and more precise image-guided radiotherapy. It can deliver higher doses of radiation with increased accuracy, empowering the equipment to narrowly target tumors and avoid the surrounding healthy tissues and organs.

It can generate high-quality 3-D images of the tumor and surrounding anatomy, 60% faster than was possible with previous generations and using 25% less X-ray dose. These images help fine-tune a patient's position and pinpoint tumor motion during a treatment, enabling improved accuracy

when targeting the tumor.

It can be used for many forms of advanced treatment techniques including image-guided radiotherapy (IGRT), intensity-modulated radiotherapy (IMRT) and RapidArc radiotherapy technology.



It gives oncologists and multidisciplinary teams the power to manage challenging cancers with unparalleled ease and precision anywhere in the body, including the lung, abdomen, breast, head and neck.

Its speed means shorter treatment times, which leads to less interruption of patients' daily lives.

It is designed with patient ease and comfort in mind with sophisticated technology to ensure constant patient-therapist interaction.

It offers treatment options for patients who otherwise may not have been candidates for traditional radiotherapy, and offers physicians more options for treating complex cancer cases.

## Ribbon Cutting to Inaugurate “TrueBeam” Linear Accelerator



From right H.E. Mr. Shiro Sadoshima, Ambassador of Japan, Bangladesh, Major General Mohd. Habibur Rahman Khan, ndc, psc, Executive Chairman, BEPZA, Mr. Hasan Mahmood Raja, Chairman, United Group and Mr. Faridur Rahman Khan, Managing Director, United Hospital.

## A 57 year old Lady Presenting with Acute Kidney Injury with History of Fracture Pelvis

*Dr Mosabbir Akhter, Dr Md Omar Faisal, Dr Moushumi Marium Sultana, Dr Kazi Shihab Uddin, Dr Md Mainuddin, Prof Nurul Islam*

In this article, we report a 57 year old, diabetic (1 year) and hypertensive (7 years) lady who presented with recurrent episodes of vomiting for 10 days, frothy urine and urinary incontinence for 7 days. She gave a history of traumatic fracture of pelvis 1 month prior to these symptoms and was taking NSAID for pain. She had constipation as well. On examination, her vital signs were stable and hypertension controlled by medication. She was anaemic with mild peripheral oedema. Other systemic examination revealed normal findings apart from low back tenderness. Our initial diagnosis was NSAID induced AKI, Hypercalcemia with UTI. Baseline investigation revealed moderate anaemia (7gm%), high ESR (99 mm in 1st hour) and mild proteinuria in urine R/E. Renal function tests revealed S creatinine- 8mg/dl, Blood urea-96 mg/dl, eGFR-5.16 ml/min/1.73 m<sup>2</sup>. She had

hypercalcemia with low albumin level, urine NGAL was 2.5 fold higher than normal limit. Urine for C/S, X-ray skull, CXR, X-ray pelvis, serum protein electrophoresis and bone marrow aspiration were done that very first day of admission because Multiple Myeloma was also suspected. There were multiple lytic and expansile lesions in the skull, left 3rd rib, right hip bone (ischium and ramus with old fracture). Serum protein electrophoresis report suggested IgG variety of Multiple myeloma. Serum total protein was 115 gm/L (NR 65-85 gm/L), serum IgG-17785 (NR 700-1600), serum IgA-24 (NR 40-100) and  $\beta_2$  microglobulin level was 40.77 (NR .97-2.64). There was no Bence-Jones protein in urine. In the meantime hypercalcemia was managed and she was dealt accordingly with anti-diabetic, antihypertensive and antibiotics medication. She received 2 separate

sessions of haemodialysis along with albumin infusion and was transfused 3 units of whole blood. Urine C/S showed moderate growth of  $\beta$  haemolytic streptococcus with good range of sensitivity. Bone marrow examination report revealed plenty of atypical plasma cells (98% of total marrow cell) favouring the diagnosis of multiple myeloma. We consulted with Haematology department and she was diagnosed with Multiple Myeloma of high risk group according to International Staging System (ISS). She was prescribed Bortezomib based combination chemotherapy along with Thalidomide and Dexamethasone. Gradually patient's renal function came back to normal and she responded well to treatment. In this case Multiple Myeloma is the primary disease which was complicated by fracture pelvis, NSAID induced AKI, Hypercalcemia and UTI.

## Bilateral Hypoplastic Internal Carotid

*Dr Jan Mohammad*

Agensis and hypoplasia of the internal carotid artery (ICA) are rare congenital anomalies, occurring in less than 0.01% of the population. They are more often unilateral. Bilateral ICA agensis or hypoplasia is even rarer. Of the slightly more than 100 cases of ICA agensis or hypoplasia reported, only around 20 were bilateral. Many of these patients are asymptomatic due to good collateral circulation and the anomaly may be detected only incidentally. We report a case of bilateral ICA hypoplasia in a 64 year old gentleman. The patient was admitted in another hospital where Doppler study of neck vessels were performed and reported as moderate to significant stenosis in both ICAs. He was further investigated with CT Angiogram of neck vessels at United Hospital. CT angiogram revealed bilateral hypoplastic ICAs. The common carotid artery (CCA), the proximal 1cm of ICA, and the external carotid artery (ECA) were normal bilaterally. The cervical and intracranial part of ICAs on both sides were visualized as thin streaks. Right anterior circulation was well developed

and supplied by the basilar artery through dilated right PCA.

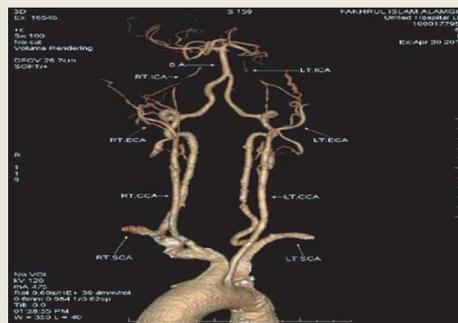


Fig: CT Angiogram of neck vessels shows Bilateral Hypoplastic Internal Carotid Arteries.

The left anterior circulation was poor as there was no left posterior communicating artery and hypoplastic A1 segment of right ACA. The exact cause of this developmental anomaly is not known. A small or an absent carotid canal indicates the congenital nature of the pathology. ICA hypoplasia has to be distinguished from acquired stenosis as the management of the two conditions is different.

## Airport Emergency Exercise 2013



On 1 December 2013 United Hospital participated in "Airport Emergency Exercise 2013" at Hazrat Shahjalal International Airport. The theme for this year's exercise was to rescue passenger from an aircraft with 110 passengers which crashed on the Airport runway.

More than 26 government and non government agencies including Military, Police, Fire Services and different Hospitals took part in the exercise. From United Hospital a team of 6 members led by Dr. Rishad Choudhury Robin took part in the exercise.

## A case of Myeloproliferative Disorder

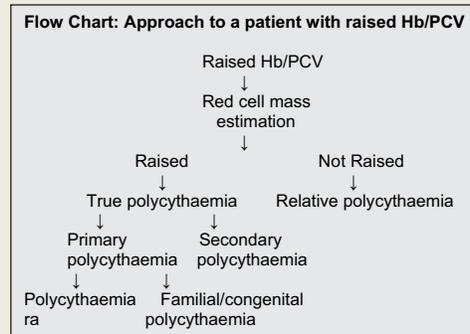
Dr S Hossain, Dr M R H Masum, Prof Brig Gen (retd) Z Mahmud, Prof K A R Sayeed

**Case history:** Mr. MMK, a 60 year old male from Chittagong was admitted on 20th August, 2013 with the complaints of central chest pain and shortness of breath for the last two months. The pain was intermittent, sharp and localized, and was relieved by rest and sublingual GTN. He also complained of generalized weakness after physical exertion. He had a history of hospitalization with acute MI on 7th May, 2013. He was on antihypertensive and hypoglycaemia medication. General and systemic examination revealed no significant abnormality.

The patient was then investigated thoroughly. CBC report showed raised total RBC, WBC and Platelet counts and low red cell indices. PBF was suggestive of polycythemia with iron deficiency. Bone marrow was suggestive of myeloproliferative disorder. Serum iron profile confirmed iron deficiency. Molecular studies of marrow aspirate using PCR revealed JAK2 V617F mutation. It was negative for BCR/ABL mutation. Fasting blood sugar was raised. ECG showed OMI anterior and angiogram confirmed single vessel disease. Results of liver and renal function tests, coagulation profile, fasting lipid profile, troponin I, echocardiogram, serum erythropoietin, serum vitamin B12, serum uric acid, urine R/E, stool for OBT, CXR, USG of abdomen were all normal.

History, general and systemic examination and laboratory investigation findings led to the final diagnosis of Polycythemia Vera with iron deficiency with single

vessel disease with preexisting HTN and DM. The patient was treated with Hydroxyurea and iron.



Polycythemia vera (also called primary polycythemia, primary proliferative polycythemia, polycythemia rubra vera) is a clonal stem cell disorder characterized by hyperplasia of all three haemopoietic cell lineages. Erythropoiesis is autonomous and is independent of the concentration of erythropoietin. Precise molecular defect is unknown. JAK2 V617F mutation is considered to be responsible for uncontrolled red cell proliferation.

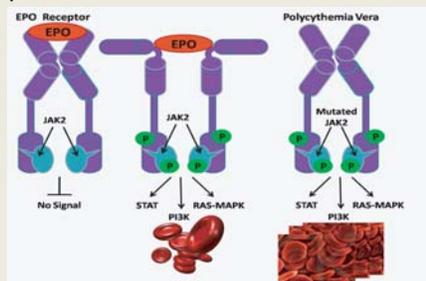


Fig: Role of JAK2 mutation in PV.

Patients with polycythemia vera present with pruritus, plethora, thrombo-embolic complications, gout, CNS symptoms and splenomegaly. 25-30% are asymptomatic at diagnosis.

Diagnostic criteria (polycythemia vera study group, 2000).

- A1: Raised red cell mass (PCV >60% in males, >56% in females)
- A2: Normal aPO2 and no elevation of serum EPO.
- A3: Palpable splenomegaly.
- A4: Acquired mutation in haemopoietic cells, like JAK2.
- B1: Thrombocytosis.
- B2: Neutrophil leucocytosis.
- B3: Ultrasonological splenomegaly.
- B4: Low serum EPO.

Presence of A1+A2+ another A or another two B criteria makes a diagnosis of PV.

Patient is given drug therapy with Hydroxyurea if thrombocytosis is present.

In absence of thrombocytosis blood letting is done with target PCV of 45%.

Prognosis: PV has a relatively benign natural history. With adequate treatment the life expectancy is 11-20 years. Polycythemia vera is a very slowly progressive clonal stem cell disorder which can be managed effectively for many years.

## Dental Implant-Your 2nd Permanent Tooth

Dr Md Nazrul Islam, Dr Lutfun Nahar

Missing or lost teeth is nothing to laugh about as it can change your smile forever. When a tooth is lost, its opposite tooth becomes inactive as it requires two opposite teeth to bite. So losing teeth doesn't only change your smile but it also compromises your functionality as well. But now we can bring back missing teeth with dental implants. Dental Implants are small titanium screws that allow bone to grow in and around it. They are inserted in the jaw bone to mimic the teeth root, and in due time an artificial tooth is

attached with it to replace the missing teeth. When the treatment is finished, the new teeth on implant looks and works just like a natural tooth. For patients who have no teeth, with the help of implants, we can restore full functional set of teeth for them.

The functionality and appearance of implant supported tooth is as good as any natural tooth. So if you have any missing

tooth, dental implants can be your 2nd permanent tooth.



Fig 1- Implant is placed at the missing tooth site  
Fig 2- X-ray after 5 month showing good osteointegration  
Fig 3- Artificial tooth on the implant

## 6 Foods That Relieve Arthritis Pain

### 1. Pomegranate Juice



Knees ache? What about your hands or hips? Try some of this sour Persian fruit, which has both anti-inflammatory and antioxidant powers. It could actually protect your cartilage.

When researchers at Case Western Reserve University in Cleveland put a pomegranate extract on tissue samples of cartilage damaged by osteoarthritis, something good happened: The juice lowered levels of an inflammatory chemical linked with overproduction of a certain enzyme. In normal amounts, this enzyme is essential for cartilage replacement, but when too much is produced—as in osteoarthritis—cartilage wears away.

### 2. Foods High in Omega-3 Fatty Acids



For years, researchers have noticed that people with arthritis who eat plenty of oily fish seem to have less inflammation and pain than those who don't eat as much fish. Now they have an explanation: It seems that like aspirin, the omega-3 fatty acids in fatty fish boost production of a recently discovered class of anti-inflammatory fats called resolvins.

In one study, both omega-3s and aspirin boosted the production of resolvins, which in turn inhibit the activity of inflammatory cells. This is good news for people with osteoarthritis and particularly for those with RA, which can inflame organs as well as joints.

### 3. Foods Rich in Antioxidants



Researchers have suspected for some time that free radicals, those unstable molecules that attack healthy cells, play a role in causing arthritis. Now it's becoming clear how they wreak their havoc on joints. According to a recent Japanese study, free radicals sabotage cartilage's ability to maintain and repair itself. People with arthritis tend to have more than their fair share of free radicals and therefore should make an extra effort to get more antioxidants, especially vitamin C and beta-carotene from foods. Vitamin C in citrus fruits like oranges and kiwifruit, and zeaxanthin, an antioxidant found in green leafy vegetables, lowered the risk, too. Those leafy greens (like spinach and turnip greens) also pack a fair amount of vitamin E, and some studies have shown that large doses of this vitamin from supplements may also relieve osteoarthritis pain, especially in combination with vitamin C.

### 4. Pineapple



Bromelain, a protein-digesting enzyme in this tropical fruit, is surprisingly good at bringing down inflammation. It may be as effective for reducing osteoarthritis pain as some anti-inflammatory medications like ibuprofen, at least when it's taken in supplement form. Some studies of bromelain supplements suggest it may help reduce the pain of RA as well. Eat your pineapple between meals, not with them, or the enzymes will

be used up digesting your food, and choose fresh or frozen pineapple, not canned pineapple or pineapple juice.

### 5. Anti-Inflammatory Spices



Researchers have discovered that many spices fight inflammation. Ginger and turmeric—a yellow spice that lends its color and taste to curries—contain a powerful compound called curcumin, which inhibits enzymes and proteins that promote inflammation. Several studies have found that ginger and turmeric specifically reduce pain and swelling in people with arthritis. Cloves contain an anti-inflammatory chemical called eugenol. In recent animal studies, eugenol inhibited COX-2, a protein that spurs inflammation—the same protein that COX-2 inhibitor drugs like celecoxib (Celebrex) quash. Cloves, turmeric, and ginger also contain antioxidants, important in slowing the cartilage and bone damage caused by arthritis.

### 6. Green Tea and Citrus Fruits



This motley crew is drawn together by one thing: quercetin. Laboratory and animal studies indicate that this chemical compound acts as a powerful anti-inflammatory and antioxidant. Early studies in animals suggest green tea may help prevent or ease symptoms of RA. And according to the Iowa Women's Health Study, women who drank more than three cups of tea a day were 60 percent less likely to develop RA than women who didn't drink any.

## 7 Warning Signs of Rheumatoid Arthritis

### How Do I Know?

If you're unsure whether you're developing rheumatoid arthritis there are warning signs. Here are the seven most commonly affected part of the body you need to keep an eye on:

#### 1. Shoulders and Elbow

The shoulders are often affected by rheumatoid arthritis. Typically, sufferers experience pain in the upper arm at night and difficulty lifting the arm.

#### 2. Knees

Inflammation of the knee joints can be severe and is often associated with marked swelling due to the accumulation of a large amount of synovial fluid in the joint.

#### 3. Eyes

About 25 per cent of people with RA suffer from dry eyes. Other eye problems include inflammation of the cornea (keratitis) and inflammation of the blood vessels in the whites of the eyes (scleritis).

#### 4. Neck and Jaw

Other joints that may be affected include the vertebrae of the spine in the neck and the temporomandibular joint, which connects the lower to the upper jaw.

#### 5. Lungs, Heart and Circulation

Tiredness caused by anaemia, in which the amount of oxygen-carrying haemoglobin in the blood falls, is a feature in about 80 per cent of cases. Lung disorders may develop, including fibrosing alveolitis, a long-term condition which affects the walls

of the air sacs within the lungs. Another possible feature is Raynaud's phenomenon, in which the arteries supplying blood to the hands narrow when they are cold, causing tingling and numbness. In addition to these possible cardiovascular problems, RA often causes weight loss.

#### 6. Hands and Wrists

Rheumatoid arthritis in the hands can be severe, with pain, swelling and stiffness of the joints. RA in the wrist can cause carpal tunnel syndrome, in which compression of a nerve at the wrist results in tingling, pain and later weakening in the hand.

#### 7. Feet and Ankles

Rheumatoid arthritis affects the feet and ankles almost as frequently as it does the hands.

## Pulmonary Artery Catheter A Useful Tool for Hemodynamic & O<sub>2</sub> Transport Monitoring

Dr Shahid Ahmed Chowdhury

The birth of critical care as a specialty is largely the result of two innovations: *positive-pressure mechanical ventilation* and the *pulmonary artery catheter* (PAC). The PAC is notable for the multitude of physiologic parameters that can be measured at the bedside. In critical care medicine PAC has been used since 1970. Despite some controversies, its use remains invaluable in certain peri-operative & critical care situations. Surveys indicate that one of the major obstacles of its use is *poor understanding* by the physicians about the measure-

ments a PAC provides. We can get its benefit if we improve our understanding on PAC and that would help us to use it in a more effective & rational way. It is cost effective also - in a way that the cost of managing complications arising from improper hemodynamic management for not using a PAC in time, is much higher than the cost of the PAC itself.

In the modern field of *anesthesia and critical care*, the use of PAC is of much help to physicians; and a trained anesthesiologist or intensivist finds its use very

safe and comfortable. The appropriateness of routine use of PAC depends on a combination of patient-, surgery-, and practice setting-related factors. It could help us significantly in our routine practice as PAC gives a better guide to an early goal-directed therapy for our patients *hemodynamic* as well as *O<sub>2</sub> transport* management.

Routine use of PAC is not recommended and should be limited to cases in which the anticipated benefits of PAC outweigh the potential risks.

## Procalcitonin: Role in Diagnosis and Treatment of Bacterial Infection

Dr Matiur Rahman

Identifying early bacterial infection is the major predictor of mortality and outcome in critical care setting. Several clinical laboratory tests have been applied to the diagnosis of sepsis. The broth culture method is the gold standard for the diagnosis of bacterial infection, but a definitive result can take 24 hours or more before a conclusive diagnosis. A number of the inflammatory markers, such as leukocyte cell count, C reactive protein (CRP), and cytokines (TNF- $\alpha$ , IL-1 $\beta$ , or IL-6), have been applied in the diagnosis of inflammation and infection, but their lack of specificity has generated a continued interest to develop

more specific clinical laboratory tests. One promising marker has been procalcitonin (PCT), whose concentration has been found to be elevated in sepsis. Owing to its specificity to bacterial infections, PCT has been proposed as a pertinent marker in the rapid diagnosis of bacterial infection, especially for use in hospital emergency departments, neonatal, coronary care and intensive care units. Since its identification and association with sepsis in the 1990s, a large number of studies involving procalcitonin and its clinical application have been conducted that evaluated the role of procalcitonin in guideline manage-

ment of sepsis. It is clearly shown that high sensitivity and specificity can differentiate between bacterial and non bacterial inflammation, plasma levels closely correlate with severity of sepsis. It also predicts mortality from sepsis, rules out the true bacteraemia from contamination, prognosis of sepsis, treatment response and its negativity virtually excludes infection related to pyrexia of unknown origin. Introduction of this important test can enhance and extend hand of help to the management of sepsis in critical care set up resulting in significant reduction of mortality from severe sepsis.

## Hand Hygiene Saves Lives

Dr Kasekh Akhtar Jahan

Health care-associated infection is a major burden around the world and ranked by the World Health Organization as one of the top 10 causes of hospital deaths worldwide which threatens the safety and care for patients. The most common vehicle of transmission of Hospital Acquired Infection HAI is the hands of the health care workers. So, Hand Hygiene practice is considered as

washing one's hands with soap and water or disinfecting them with an antiseptic agent. Hand hygiene, before and after all patient or patient environment contact, before aseptic procedure, and/or after bodily fluid exposure, is recommended in all published infection control and public health guidelines and is considered the standard of care for all Health Care Workers.

compliance and regularly monitors its implementation.

Studies conducted worldwide document that healthcare workers' (HCW) compliance with hand hygiene recommendations is consistently less than 50%, with compliance among doctors routinely lower than that of other HCWs.

In our hospital we expect the doctors to act as team leaders and role model for all categories of healthcare workers. So, let the doctors play a vital role regarding Hand Hygiene practice and become an inspiration to all other Health Care Workers to keep striving for excellence.



the single most effective way to prevent HAI.

Hand Hygiene is defined as the act of

## The Year 2013 in Perspective

Each passing year brings new hope and new challenges in every one's life. The passage of time is no different for the hospital. During the current year we have achieved successes in many areas and perhaps faltered in some but that shows us new goals to achieve and new heights to scale. Overall 2013 has been a good year and we all had the satisfaction of being able to serve a greater number of patients, and hopefully, in a more efficient and better manner.

The successful holding of Hospital Continuous Medical Education (HCME) through out the year has been a crowning achievement. In all 14 HCMEs were held during the year, in addition to departmental CMEs, which was made possible by the interest and active participation of doctors of different departments and the efforts put in by departmental coordinators, the training unit and Director Clinical Operations. Now that the baton has changed hands we are hoping that this activity will

continue with equal vigour under the guidance of the Chairman, Hospital Education Committee. The Committee is also planning a few more activities that would help us to improve on the academic activities currently being carried out, and also help in following internationally accepted norms and guidelines.

During the year our Oncology department has progressed quite well and have established themselves as premier centre for treatment of cancer. This was further boosted recently with the installation and commissioning of "TrueBeam" the latest technology in radiation treatment. This machine allows faster and more precise image-guided radiotherapy. The department holds "Tumour Board" where all cases are discussed by Consultants before the treatment starts, thus enabling the doctors and the patient party to explore all possible options. The department also maintains a registry of all cases that are treated.

During the later part of the year we saw about 175 of our senior nurses leave the hospital to join government service. This created a huge problem as it directly affected the patient management. Although the HR department made a huge effort to fill the vacuum but it did not help much in patient care since there is a scarcity of reasonably trained nurses in the country. Although the nursing department with the help of the training unit has been conducting extensive training programmes but it is taking awhile to reap the benefits. The patience and fortitude shown by other care givers including doctors and the few remaining experienced nurses is acknowledged and appreciated.

Signing of cooperation agreements with Gono Bishwabidyalay and the Shishu Hospital are significant developments. Under the agreement with Gono Bishwabidyalay, the Department of Medical Physics and Bio-medical Engineering of the



## Facts on MERS-CoV

*Dr Maheen Azeem*

Middle East Respiratory Syndrome (MERS) is a viral respiratory illness. A corona virus called "Middle East Respiratory Syndrome Corona virus" causes MERS (MERS-CoV). It was first reported in 2012 in Saudi Arabia. Globally, from September 2012 to November 2013 WHO has been informed of a total 139 Laboratory confirmed cases of infection with MERS-CoV, including 60 deaths. Last lab confirmed case was a 61 year old man from Qatar who was admitted

in a hospital on 11 October 2013.

According to the information available, there is no reported case of MERS-CoV in Bangladesh. Affected countries in the Middle east include Jordan, KSA, UAE and Qatar. In Europe countries affected include France, Germany, UK & Italy and Tunisia in North Africa. Recent travelers returning from the Middle East who develop SARI should be tested for MERS-CoV. During the recent Hajj time the Saudi Government reduced the intake of Hajjis and also advised infants and older people to refrain from making the pilgrimage to limit its

propagation.

MERS-CoV has been shown to spread between people who are in close contact. Transmission from infected patient to health care personnel has also been observed. Common symptoms are acute severe respiratory illness with fever, cough, and shortness of breath and breathing difficulties. Most patients have had pneumonia; some had gastrointestinal symptoms including Diarrhea and Kidney Failure. In people with Immune Deficiencies, the disease may have an atypical presentation.

institution and the Radiotherapy Unit of the Oncology Department of United Hospital are working together to enhance education, research and training in the field of Medical Physics. The programme lets the students of Bishwabidyalay do their internships and work on the practical part of their BSc. & MSc courses and PhD thesis at United Hospital. The agreement with Shishu Hospital allows our nurses to train while Doctors from Shishu Hospital come to our hospital to learn about modern methods to take care of babies. In all about 4 doctors and 12 nurses have benefited from this arrangement.

Many of our staff had the opportunity to attend training programme both within the hospital as well as outside. We are glad to say that those who attended/ obtained professional training at different institutions have done themselves and us proud.

The investigation results from the laboratory are crucial to prepare treatment plans for any patient. Our laboratory is participating in the External Quality Assurance Service run by RANDOX of UK. In addition

our Laboratory personnel are closely working with UNIDO and Bangladesh Accreditation Board (BAB) to meet the requirement for ISO Accreditation, for which we expect to apply in early 2014.

The year has also seen a vigorous campaign successfully carried out by the Infection Prevention and Control Committee to ensure that all the national and internationally accepted standards are maintained throughout the hospital to ensure the safety and well being of the patients as well the staff of the hospital.

At the beginning of 2012 the United College of Nursing started its journey with the admission of our first batch of students in the 4 year Basic BSc course in Nursing. In January 2013 Dhaka University also gave us permission to start the 2 year Post Basic BSc Nursing course. Today we have over 70 students in the college. This year we are expecting admission of another 70 students in both courses.

In the last Quarter of 2013, following visits and inspections, the Ministry of Health and

Population gave us permission to start United Medical College. Over the past couple of months our Engineering Department put in a concerted effort to prepare the infrastructure comprising library, lecture halls, laboratories etc to convert 7th floor Wing B as the Academic Block of the Medical College. We are expecting that following inspection by Dhaka University we will commence the admission process from January 2014.

2013 has been an eventful year in many respects with many challenges and with numerous successes. We have no doubt that 2014 will present its own set of challenges. Our goal is to become the finest hospital in the country. We aim to start a *Culture of Health* where the patients are treated as partners and not as passive recipients of treatment. We look forward to everybody's cooperation to make United Hospital a better place to work, for our staff, and a better place to come for treatment for our patients.

We aim to live up to our motto of  
*"Exceptional People ..... Exceptional Care"*



## United Group and its Involvement in Healthcare and Education Sectors

The Directors of United Group as part of their social responsibility have taken a keen interest in setting up healthcare as well as educational institutions in the country.

Their journey in the healthcare sector started in 2002 when they bought "Gulshan Clinic", which was run by Dr Zaman till his death in 2001. In 2004 they set up the "NOVO Healthcare and Pharma Limited" to contribute to the

pharmaceutical sector of the country. We all know that "United Hospital Limited", was inaugurated in 2006. In addition the Directors have set up medium sized "Health Complexes" in their villages where treatment is provided to poor people almost free.

The Group has also been active in the educational sector and in 2004 set up "United International University" in Dhanmondi which today has over 5,000

students. In 2009 "United Institute of Cardio Vascular Sciences" was established providing courses in MD in Cardiology and MS in Cardiac Surgery. In 2012 the Group opened two additional educational institutions i.e "United College of Nursing" and the "United Maritime Academy". And in 2013 applied for and got permission to set "United Medical College". Permission is awaited from Dhaka University to admit students in 2014.

## Clinical Outcome of Percutaneous Coronary Intervention in Patients with Prior CABG Surgery

*Dr Ayesha Raffiq, Dr K M Sohail, Dr A M Shafique, Dr NAM Momenuzzaman*

**Background:** Repeat CABG surgery is associated with a higher risk of mortality than first time CABG. Both mortality & morbidity can be higher in elderly patients with redo CABG. Repeat revascularization by PCI can substantially reduce this risk. We studied the clinical outcome of PCI in patients with prior CABG surgery.

**Methods:** A single operator retrospective observational study including all patients treated at United Hospital Dhaka from January 2007 to December 2012 was conducted. Total 102 consecutive patients who underwent PCI to native coronary arteries, bypass

graft or both were included. Those patients with acute myocardial infarction, unstable angina, cardiogenic shock, on mechanical ventilator were excluded from the study. We saw the clinical outcome of the patients in terms of post PCI angina, death, Myocardial infarction, LVF Re-procedure, Stroke.

**Results:** In our study 97.92 % patients were male and the mean age was 58.32±9.7. Among them 74.5% had hypertension, 58.8% had diabetes, 21.6% were smoker and 22.5% patients had positive family history. In 79.5% cases we did PCI to native coronary arteries, 8.8% cases to bypass graft & in

11.7% cases both native & bypass grafts were addressed. We did not try for complete revascularization rather than target to decrease ischemic burden. No deaths occurred during the procedure or post procedural hospital stay. Out of 102 patients 69 (67.64%) were totally symptom free. Repeat revascularization was needed in 8 (6.8%) patients. In our follow up 5 patients (4.90%) died: one due to hemorrhagic stroke, two had sudden cardiac death likely from stent thrombosis & two from acute ALVF & NSTEMI.

**Conclusion:** PCI is a safe alternative as compared to repeat CABG surgery for most of the patients.

## National Training Program on Radiation Oncology

On 6 November United Hospital and Bangladesh Atomic Energy Commission jointly arranged a half day program as part of “**The Third National Training Program on Radiation Oncology**” with the technical support of International Atomic Energy Agency and local support of Oncology Club from 3 to 7 November 2013.

The topic of that program was “Quality Assurance (QA) Management in

Radiation Oncology.”

Paul Ravindran, Medical Physicist from India; Somsak Wanwilairat, Medical Physicist from Thailand and Dr. Ms Madhavi Goonetilleke, Radiation Oncologist from Australia were the main trainers of this practical session. A total of 15 trainees from different institutions of Bangladesh like NICRH, BSMMU, and DMCH etc. participated in this exclusive program. Two Physi-

cists namely Mohammad Faruk Hossain and K .H. Anamul Haque from United Hospital also attended the training program.

A part of the practical session was held in the Treatment Planning Room of United Hospital where our Radiation Oncology Consultants as well as our Chief Medical Physicist contributed to the overall program.

## Drug Induced AVN of Femoral Head

*Dr Masum Billah, Dr Bishnu Pada Das, Dr Aminul Hasan*

A 30 year old female came to United Hospital Limited with pain around both hips with difficulty in walking and squatting for three years. She had difficulty in maintaining her personal hygiene and personal life. She did not give any history of trauma. She had a history of long term high doses of steroid (Methyl Prednisolone) to gain weight. On physical examination, ranges of motion of both hips were severely limited and painful in all directions. She even had pain at rest. Lower limb reflexes and neurological testing were normal bilaterally, muscle weakness was noted in both lower limbs due to disuse and wasting. Based on history, clinical and radiological examination the patient was diagnosed with drug induced avascular necrosis of both hips. Pre operative X-rays of both

hips showed presence of patchy, lucent sclerosis in both femoral head regions with collapse and irregularity of the articular cortex with proximal migration of femoral head of left hip. CT scan of both hips were done to see the extension of lesion. She also underwent muscle pedicle bone graft on left hip joint two years ago in another hospital and the condition did not improve. Both hips were ankylosed. The patient had sequential cemented total hip replacement on both sides in six weeks interval, in the year of 2009. Post operative recovery was uneventful and the patient was monitored with periodic follow-ups, while undergoing postoperative rehabilitation. This initially consisted of passive stretching of hamstring, quadriceps, hip flexors and abductors, as well as passive and

active range of motion exercises for the hips and knees. After proper exercise and physiotherapy she was ambulatory unaided and was also able to maintain her daily household activities smoothly. Management of avascular necrosis varies depending upon the age of the patient, stages of the AVN, occupation and previous treatment received etc. Core decompression, bone grafting and valgus osteotomy, Hemiarthroplasty can be considered in early stages and total hip Arthroplasty in later stages of AVN of femoral head. Arthrodesis was also an alternative available but now a days it is not popular as total hip replacement is more rewarding. In advanced stages of the disease life may be rendered, crippled and miserable. Total hip replacement has proved to be a good option for these patients.

## Top Ten tips for Better Health

The following tips will not only make you look better and feel better, but they will also keep you from developing long-term serious health problems.

### • Cover up in the sun



UV rays are penetrating the earth's atmosphere all year long. It's important to wear protection at all times to protect yourself from excessive sun exposure.

### • Cut out fat



Dairy products such as cheese, milk and cream should be eaten in low fat versions. Butter and sauces in sandwiches should be kept to a minimum, if possible. And try to avoid fried or fast food, as they have a high amount of fatty acids in them.

### • Eat Healthy



Make sure you eat lots of fruit and vegetables each and every day. Even try adding a multivitamin to your daily routine. You'll soon see the difference.

### • Don't smoke



Give up smoking as soon as you can. Smoking not only causes lung cancer, but it also recently been linked to many other illnesses.

Research has shown that smoking reduces life expectancy by seven to eight years. So try giving up the next one.

### • Drink alcohol in moderation



Recent studies have shown that a glass of red wine a day can help protect against heart disease. But if you drink excessively, you will have health problems such as liver and kidney disease and cancer in later life.

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### • Get active



One of the best ways to stay healthy is to exercise. It's recommended to do 30 minutes of cardio exercise 3 times a week. This even includes going for a walk with the dog, or even running around with the children.

### • Keep stress in check



Getting stressed out is bad for your health. If you are stressed in the work place you are more likely to cause an accident and injure yourself or even fall ill.

### • Positive outlook



It has been scientifically proven that a person with a positive outlook on life will be healthier than someone who doesn't. When you smile

your brain releases small amounts of serotonin that give your body a good feeling. So next time you are sad, smile.

### • Relax



Relaxation has actually become a medical treatment. It's very important to relax in the evenings after work.

Try to find somewhere that you feel comfortable, and just kick back. It can be anywhere from a chair, to a bubble bath.

### • Ways to increase your daily exercise



Walk to the shops rather than taking the car. Try taking the stairs whenever possible. If you get two or more buses,

can you walk one of the journeys?

## Renal Transplant an Overview in United Hospital

**Dr Farooque Azam, Prof Nurul islam, Prof M H Mollah**

Renal Transplant Program in United Hospital started in August 2008. So far 38 renal transplants have been done here with a very good success rate, probably the best in the country. The renal package is for 14 days where the recipient requires hospitalization for 14 days and the donor for 7 days.

Patients are prepared for renal transplant using a step-by-step protocol which adheres to the national regulatory requirement as well as internationally accepted guidelines.

The Government of Bangladesh enacted the Organ Transplant Act on 13 April 1999 which stipulates the regulatory requirements for any transplant. Our Nephrology department follows all the rules and regulations and strictly follows the conditions laid down in the Act. A primary requirement is that the donor should be a close relative. The act identifies the type of relations that are acceptable under the law. Both the recipient as well as the donor needs to produce different types of authenticated

documents for record purposes, which forms part of a legal document in case of any dispute.

There are also various types of tests and investigations that both the parties have to go through to determine the clinical condition of both the parties as well as compatibility and suitability i.e tissue matching. Some of the requirements include:

1. The donor should be free of hypertension and diabetes
2. The following tests & investigations are done :
  - a) HLA Tissue Typing with B&T cell cross match, donor blood group, CBC, Renal Function Test, Liver Function Test, HBsAg, Anti HCV, VDRL, HIV, Urine R/E, CXR P/A, USG Whole Abdomen with PVR
  - b) If the above test results are satisfactory then further tests are done: electrolyte, calcium phosphate, 24 hour urine for UTP, CCr, Urine C/S, Throat Swab C/S, ECG, ECHO, CMV IgG, IgM
  - c) DTPA Renogram - to see the split

function of both kidneys

- d) Renal Angiogram - to see renal vessels. Renal Angiogram is a special Xray of blood vessels of the kidneys
3. Recipient blood biochemistry including cardiac status is checked – if necessary CAG of recipient is done before going for renal transplant.
4. Immuno-Suppression Protocol – we make use of mycophenolate mofetil in combination with Tacrolimus and steroid

Once all the tests have been completed and found in order, all documents both clinical and the regulatory, goes to the Hospital Ethical Committee for scrutiny. If all the documents are found in order and meet the regulatory requirements the Committee gives approval for the transplant to go ahead.

Abiding by government laws and regulations in choosing/selecting the donor, highly complicated kidney transplants rejected by other countries have been successfully carried out in United Hospital.

## Visits to United Hospital

- A delegation from “Vanbreda International & CIGNA Global Health Benefits” a Belgium based international Insurance Company visited United Hospital to meet with the hospital’s Management, Marketing & Billing personnel regarding the overall services & billing service on 5 October 2013.
- A delegation from “Chevron Bangladesh” came to United Hospital to see the existing facilities on Wednesday, 6 November 2013.
- Dr. Jahangir Khaled, Corporate Medical Advisor of Unilever (BD) Limited visited United Hospital on 7 November 2013.



- A delegation from U.S. Embassy, Dhaka comprising of 15 members led by Ms. Katie Kotopoulos, Family Nurse Practitioner came to United Hospital on Monday, 2 December 2013 to see the hospital’s various services.



- A delegation from British High Commission, Dhaka, led by Mr. Mathula Lusinga, Community Liaison Officer came to United Hospital on Thursday, 5 December 2013 to see the availability of hospital’s various services.

## Awareness Session:

October is the Breast Cancer Awareness month. To mark the occasion, United Hospital organized an “Awareness Session” on Sunday, 13 October 2013 at the Seminar Hall of United Hospital. Dr. Aliya Shahnaz, Consultant-Radiation Oncology Department of United Hospital made a presentation to the attendants. A good number of participants from different national & multinational companies, clubs, societies, embassies & high commissions and other institutions attended the awareness session.

## Scientific Seminar & Workshop:

- A Scientific Seminar on “**Cushing’s Syndrome-Unveiling the Facts**” was arranged on Friday, 8 November 2013 at the Seminar Hall of United Hospital. The American Association of Clinical Endocrinologists (AACE), Bangladesh Chapter organized the CME.
- A CME Program on “**Quality Diabetes Management**” was arranged on Thursday, 21 November 2013 at the Seminar Hall of United Hospital. Dr. Nazmul Islam, Consultant – Diabetes & Endocrinology Department of United Hospital delivered the Introductory Speech. Dr. Debashis Das, Consultant, Diabetes of India Medtronic Private Limited was the main speaker at the CME.

## GCCN 3rd year student nurses Internship



40 3rd Year Student Nurses of GCCN completed Internship on 24 December 2013 in United Hospital. On the first day of orientation, Dr. Monette Barrento Brombuela, Chief Nursing Officer briefed them on the guidelines which they must comply with and then they were assigned in different departments. The young student nurses are bright and smart as well as sincere with their assigned responsibilities. We wish them a successful future.

## Medical Campaign

Dr. Nazmul Islam, Consultant Diabetes & Endocrinology Department of United Hospital went to Chittagong to provide consultancy services to patients on Thursday, 3 October 2013.

## Assessor Training on Medical Laboratories



Md. Aksad Ali, Assistant Quality Control Manager, Biochemistry & Ms. Tamanna Taslim, Scientific Officer, Quality Control, Microbiology from Laboratory Medicine Department attended Assessor Training on Medical Laboratories ISO 15189:2012 conducted by Norwegian Accreditation (NA) & Bangladesh Accreditation Board (BAB) at Hotel Ruposhi Bangla, Dhaka.

## Patient Satisfaction Award



A Total of 35 staff from different departments of the Hospital received special Token of Appreciation on 10 November 2013 from the Management through the evaluation of "Patient Satisfaction and Relations Unit" based on their performance for the period from July to September 2013.

## A Patient with Headache Develops Dark Urine

*Dr Nazmul Kabir Qureshi, Dr Syeda Fahmida Hossain, Dr Fazlul Haque, Dr Afsana Begum, Dr Md Iqbal Hossain, Dr Pradip Ranjan Saha*

A 50-year-old male was admitted to medicine department of United Hospital on August 15, 2013 with the complaints of feverish feeling, headache and fatigue for 4 days. Routine blood tests including MP, dengue NS1 antigen were done, the only positive finding was low platelet count ( $98 \times 10^3$ ). Two days later, he became afebrile, but his headache and weakness increased. He had just returned from Nigeria where he had suffered from malaria 10 times and was treated with quinine. Clinical examination revealed: BP 100/70 mmHg, congested conjunctiva, jaundice, flushed skin, tender hepatomegaly and no fever and meningeal irritation. Dengue IgM positive was positive with platelet count  $21.4 \times 10^3$ , Serum bilirubin 3.70 mg/dl and negative viral markers.

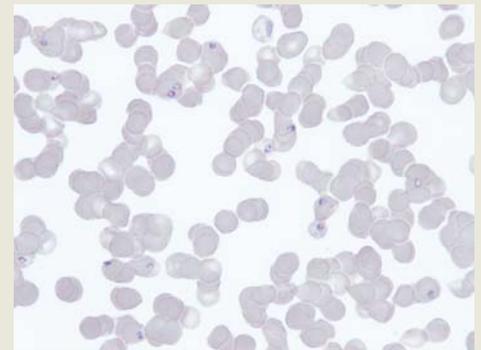
The following day his headache got worse and he became febrile ( $104^\circ\text{F}$ ). CT of brain revealed no abnormality and MP and ICT for malaria revealed plenty trophozoites of Plasmodium Falciparum

(figure) and ICT-for Malarial parasite-Positive (P. Falciparum). Combination of artemether and Lumefantrine (Coartem) was started immediately. After two doses, his condition improved but he developed dark urine due to hemoglobinuria. A day later, he became symptom free with negative MP test, negative Hb in urine, normal S. Bilirubin (0.73) and platelet count of  $94 \times 10^3/\mu\text{l}$  and was discharged with the dual diagnoses of Black Water Fever (BWF) with Dengue fever.

With 216 million cases per year, malaria caused 655,000 deaths and 86% of them were children under five years. BWF, resulting from possible acquired immune pathogenesis is characterized by fever with acute intravascular haemolysis presenting with dark urine (haemoglobinuria), jaundice and is caused by P. falciparum mono or mixed infection of P. falciparum and P. malariae. High parasitaemia, non-immune residents, ingestion of mostly

quinine and rarely other anti-malarial drugs, such as artemether-lumefantrine have been reported to be associated with BWF.

This case presents a rare entity by concordant presence of BWF and Dengue fever and precipitation of BWF by less-reported drug artemether-lumefantrine



**Figure :** Blood film for MP showing trophozoites

## A Success Story in Neurosurgery at United Hospital

*Dr Dabir Uddin Ahmed*

A rare neurosurgery in a small baby has been performed successfully at United Hospital by Consultant Neurosurgeon Dr. Syed Sayed Ahmed and his team. The patient was a diagnosed case of Middle Cerebral Artery (MCA) aneurism with obstructed hydrocephalus. The operation took nearly 5 hours to clip the MCA aneurism through craniotomy and drainage of fluid along with a connection of fluid filled sac with CSF circulation. A major role of this critical operation was played by Consultant Anesthetists Dr. Md. Shahidullah & Dr. Munshi Kalamur Rahman.

### Case Summery:

Ahnaf Alam a male baby aged 5 months was admitted in Neurosurgery department of United Hospital on 11 November 2013 as a diagnosed case of Arterio Venous Malformation (AVM). He had history of repeated vomiting followed by unconsciousness and convulsion since last 3 months for which he was taken to Dhaka Shishu

Hospital on 18 August 2013. Then the baby was brought to Square Hospital on 20 August 2013 with increased episode of convulsion & cyanosis. CT scan of the brain showed intra ventricular hemorrhage & CT angiogram of the brain revealed small AVM in right MCA. Craniotomy was done there & diagnosed as Intra Cranial Hemorrhage (ICH) with Sub Arachnoid Hemorrhage (SAH) due to MCA aneurysm.

The baby didn't improve & was brought to Apollo Hospital on 23 September 2013 with complaints of fever, refusal of foods, decreased urine output & pressure sore over occipital region. No active neurosurgical procedure was performed there & the baby was discharged with conservative management. Then the parents went to India with the baby for better treatment. But returned back as there was little hope of recovery expressed by the surgeons abroad.



Finally the baby was admitted to United Hospital on 11 November 2013. On examination MCA aneurism was found increasing in size along with a large irregular CSF space at the site of previous hemorrhage. The operative procedure Clipping of Rt. MCA Aneurism, Augmented Cranioplasty, drainage of fluid & making a connection of the fluid sac with CSF circulation was done on 13 November 2013. The post operation phase was uneventful and baby recovered without any complications. The baby was healthy and discharged on 24 November 2013.

## Congratulations & Best Wishes to the following Staff and their Spouses:



### New Baby

- Staff Nurse Abanti Bairagi of 6th Floor Oncology Ward had a baby girl, Audhara Shrestha Authoy on 28 September 2013.
- Staff Nurse Joba Rani Hajong of Neuro O.T. had a baby girl, Kamalini on 28 September 2013.
- Staff Nurse Bonya Nokreka of OPD 4 Cardiac Surgery had a baby girl, Jasana on 6 October 2013.
- Unit Supervisor Nurse Shima Biswas of 4th Floor had a baby boy, Sammow Mazumder on 7 November 2013.

## We Congratulate the Newly Weds on the Auspicious Occasion of their Marriage



- Staff Nurse Tajmira Mostari of 3rd Floor got married to Sharif Tuhin on 17 October 2013.
- Billing Officer Md. Rubel Hossain of Finance & Accounts department got married to Mahmuda Akter Shumi on 8 November 2013.
- Staff Nurse Nahida Akter of 3rd Floor got married to Md. Sanowar Hossain on 15 November 2013.
- Staff Nurse Momota Ekka of 3rd Floor got married to Badal Adhikari on 15 November 2013

## Death of a Colleague

We mourn the sudden, tragic death of one of our fellow colleagues, 25 year old Md. Sohel Rana, Waiter F&B Department. He passed away on 15th October 2013-may his soul rest in eternal peace. We extend our deepest sympathy, prayers and condolence for his family.

## Condolence & Prayers

- Staff Nurse Khadija-tul-Cobra of 3rd Floor lost her father Mr. Kasir Uddin on 1 November 2013.
- Customer Relations Officer Taslima Akhter & Medical Records Assistant Mareyam lost their father Mr. Md. Shamsuzzuha on 13 November 2013.
- Patient Care Attendant Arafat Khan of Nursing Dept. lost his father Mr. Atiar Rahman Khan on 15 November 2013.
- Customer Relations Officer Abdul Malak lost his father Mr. Abdul Latif on 18 November 2013.

## Mother Teresa Gold Medal 2013



Prof. Dr. Santanu Chaudhuri, presently working as Director, Oncology Center and Consultant Clinical Oncology at United Hospital receiving the Mother Teresa Gold Medal 2013, awarded by World Human Rights Council on 9 November 2013 for his contribution in the field of cancer, from Mr. Jainul Abedin, former Justice.

## Bangladesh Bank Recognises Selfless Work



Mr. Tarek Hasan, Staff Nurse of United Hospital received an Appreciation Certificate and token money from Dr. Atiar Rahman, Governor Bangladesh Bank on 9 November 2013 in a ceremony arranged by Bangladesh Bank. The function was organised to recognise the dedicated service of general people in rescuing people from the building, attend to the wounds and saving lives in Rana Plaza incident at Savar.

## Inter Department Badminton Tournament December 2013



The Inter Departmental Badminton Tournament December 2013 was inaugurated by Mr. Najmul Hasan, Chief Executive Officer of United Hospital on Thursday 28 November 2013. The preliminary knockout matches of this year's tournament started with the participation of 100 players under four groups, representing different departments. The tournament format comprised of four categories.

Teams were divided according to their age i.e (i) under 40, (ii) between 40 and 50, and (iii) above 50. In addition we also had an exclusive format for female participants. Our Chief Guest Mr. Faridur Rahman Khan, Managing Director of United Hospital was present to watch the final games and distribute prizes amongst the winner's, Runner-Up's & other officials on Sunday 15 December 2013.

The winners of the tournament were:

- Group Ka (under 40):* Mr. Amdad Ali & Mr. Md. Shafiullah,
- Group Kha (40 and 50):* Dr. A.M. Shafique & Dr. Ashim Kumar Sengupta,
- Group Ga (above 50):* Mr. Md. Mujibur Rahman & Dr. Mahboob Rahman Khan
- Female Group:* Ms. Umme Salma & Ms. Fouzia Kuddus

## Season's Greetings & Happy New Year



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- Hanufa Ahmed

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