

Editors Note

With this issue 'reflection' steps into 3rd year of its publication. It is a platform where information concerning staff and the hospital is disseminated to inspire clinicians and non clinicians alike to be aware of developments and to change for better.

As part of our policy this issue highlights our Laboratory not only because they have received Accreditation (ISO 15189:2012) but also because they play such an important role in patient treatment. We are also delighted to let you know that BCPS has agreed to treat the work of our doctors in the Oncology Department, particularly Radiotherapy, as part of their training requirement towards post graduation qualification.

Due to recent proliferation of infectious diseases like H1N1, Ebola etc, there is a need to re-emphasise the importance of infection control measures. We are conscious of our responsibilities and some of our staff have also attended training programmes organized by the government.

We request all our readers to invest their time and effort in preparing & sending articles to us. We also wish our readers **Shuvo Noboborsho** and welcome bangla year 1422.

Live Satellite Transmission From United Hospital to Pan Pacific Sonargaon Hotel on 5th Bangla Interventional Therapeutics



The 5th Bangla Interventional Therapeutics was held from February 6-8 at Pan Pacific Sonargaon Hotel. This is the international meeting of Interventional Cardiologists of different countries.

One of the main sessions of the program was Live Satellite Transmission on Coronary Chronic Total Occlusion (CTO) from United Hospital Cath Lab to Pan

Pacific Sonargaon Hotel on 7 February 2015. Dr. Shigeru Saito, Director of Cardiology and Catheterization Laboratories, Shonan Kamakura General Hospital, Kamakura, Japan and from the Cardiology Department of United Hospital Dr. N. A. M. Momenuzzaman, Chief Consultant, Prof. Dr. Afzalur Rahman, Consultant & Dr. A.M. Shafique Associate Consultant

successfully performed the CTO. Dr. Shigeru Saito is one of the leading cardiology supporters and practitioners of Transradial Coronary Intervention (TRI).

Dr. N. A. M. Momenuzzaman, Dr. Kaiser Nasrullah Khan and Prof. Dr. Afzalur Rahman were present in the different sessions of the program and gave speeches and presentations.

United Hospital Observed World Cancer Day & World Kidney Day 2015



World Cancer Day was on 4 February 2015. This year the slogan is "Not Beyond Us".

To observe the day United Hospital arranged a Health Awareness Booth at the hospital lobby where complimentary consultations including measurement of blood pressure and sugar were provided. Mr. Najmul Hasan, CEO of United Hospital officially opened the booth. Oncologists and other officials of the hospital were present in the opening session. In

the evening, United Hospital and Nestle Bangladesh Ltd. jointly organized a Cancer Awareness Session at Nestle Corporate Office. Dr. Md. Rashid Un Nabi, Consultant Radiation Oncology was the speaker of the session. Mr. Stephane Nordé, Managing Director of Nestle Bangladesh Ltd. & Dr. Dabir Uddin Ahmed, Director Clinical Operations of United Hospital along with officials of the respective organizations were present in the session. United Hospital also offered a week long special cancer screening package and discount on PET/CT scan to celebrate the day.

This year World Kidney Day was observed on 12 March and the slogan for 2015 is "Kidney Health for All". United Hospital observed the day with various activities. A Health Awareness Booth was set up where Nephrology consultations



and other medical check up were provided on complimentary basis. The booth was opened by the CEO of United Hospital Mr. Najmul Hasan along with Prof. Dr. Nurul Islam and Prof. Dr. M. Mujibul Haque Mollah. A week long special package was also introduced to observe the day. United Hospital also arranged three Renal Care Awareness Sessions at Citibank NA, CEMEX Bangladesh and Grameenphone Limited where Nephrology Specialists made presentations.

Recognition of United Hospital's Radiotherapy Department By BCPS

It is a matter of great pride for United Hospital and the Radiation Oncology Department that it has received approval of Bangladesh College of Physicians and Surgeons (BCPS) recently whereby work done by our

doctors will be recognised as part of their training requirement towards FCPS.

This recognition will help certify young Oncologists trained in United Hospital. These young Oncologists will be able to

raise the standard of patient care by imparting their knowledge and experience in other centers of Bangladesh and represent the country with confidence in any premier cancer set up in the world.

Training on Avian Influenza-A H1N1, EVD

On 25 March 15 one day training on Avian Influenza-A H1N1, Newly Emerged EVD (Ebola Virus Disease) was arranged by IEDCR (Institute of Epidemiology Disease Control and Research) at Mohakhali. Five Nursing Unit Supervisors from United Hospital Mst. Sabina Yasmin, OPD, Nupur Halder, GICU, Papi Rani Sen, G/C, Shamima Alter, ER and Salina Akter, IC attended the training. Training emphasis was on disease, infection prevention, control and practical demonstration was on personal protective equipment.



Role of B-type Natriuretic Peptide (BNP) in Heart Failure

Dr Mohammed Helal Uddin

Heart failure still remains a major challenge especially in the area of clinical diagnosis. This is because the common symptoms typically associated with heart failure such as oedema, shortness of breath and fatigue are neither sensitive nor specific for heart failure. It should also be noted that classic signs such as crepitations, peripheral edema, a third heart sound and raised jugular venous pressure are often absent. Echocardiography is generally recognized as the gold standard investigation for detecting presence of heart failure. However, it is not always easily accessible and may not always be diagnostic in acute presentation. Many studies have now demonstrated that diagnosis of heart failure based on history, physical signs and standard testing may be inadequate.

B-type Natriuretic Peptide (BNP) is a

cardiac neurohormone secreted from cardiac myocytes in response to cardiac wall stress caused by pressure or volume overload. The initial molecule is a 134 amino acid protein, pre-pro-BNP but after cleavage of a signal peptide (26 amino acid), a 108 amino acid prohormone, pro-BNP remains. Before release into the blood stream, Pro-BNP is cleaved into two parts, the biologically active 32 amino acid chain BNP and the inactive 76 amino acid neurohormone NT pro-BNP. The cardiac hormone relaxes the vascular smooth muscle and increases capillary permeability. In the kidney, it increases the glomerular filtration, inhibits the release of rennin and reduces sodium re-absorption in the collecting ducts. It also inhibits the release of aldosterone and Anti-Diuretic Hormone (ADH) while reducing sympathetic nervous activity.

Presently BNP/NT-proBNP is recognised as a potential biomarker in ruling out heart failure in patients with dyspnoea. According to ESC and NICE recommendation, chronic heart failure is unlikely if BNP <100 pg/ml and NT pro-BNP < 400pg/ml and heart failure is likely if BNP > 400 pg/ml and NT pro-BNP > 2000 pg/ml. Diagnosis is uncertain if BNP 100-400 pg/ml and NT pro-BNP of 400-2000 pg/ml. Elevated level of B-type natriuretic peptide indicates a worse prognosis in patients with heart failure. Optimization of medical therapy for heart failure on the basis of plasma BNP level is proven to be beneficial only in patients less than 75 years old. However, there is no firm evidence to suggest routine measurement of natriuretic peptide in order to guide therapeutic strategies. It requires further in-depth research.

Emergency Doctors from United Hospital Conducted A Trauma Workshop

Dr Abdullah Al Farook, Dr Shaokat Zaman



On 2 January 2015, the 6th International Conference on Emergency Medicine (EMICON 6) was organized by Bangladesh Society of Emergency Medicine

United Hospital's Emergency Doctors Team had great success running the ATLS station that was included in the workshop for the first time.

(BSEM) where two of our emergency physicians Dr. S. Zaman and Dr. Farook ran an Advanced Trauma Life Support (ATLS) station for the Trauma Workshop. The daylong workshop with more than 90 participants from all over Bangladesh was held at DMCH. A conference was held the next day with speakers from USA, Australia, UK, India and Bangladesh.

It was a great honor for both the emergency physicians of United Hospital to be invited as speakers by the president of BSEM Dr. Humayun Kabir Chowdhury and Secretary General of BSEM Dr. Raghieb Manzoor on 3 January 2015 at Milon Hall, BSMMU. The chief guest was National Professor MR Khan and the special guest was Professor Pran Gopal Dutta, Vice-Chancellor, BSMMU. Dr. Ohidul Alam, Consultant A&E (UK) and Dr. Ziauddin Ahmed, Consultant, Nephrology & Critical Care (USA) appreciated the presence of emergency doctors from United Hospital at the conference as well as at the Trauma Workshop.

Targeted Therapy - An Option For EGFR Mutated Adeno Carcinoma Lung

*Dr Kazi Abdullah Arman, Dr Israt Jahan, Dr Ashim Kumar Sengupta, Dr Ferdous Shahriar Sayed, Dr Rashid Un Nabi
Prof Dr Santanu Chaudhuri*

Non-small cell lung cancer (NSCLC) comprises 80-85% of all lung cancers which can be further divided into different kinds amongst which adenocarcinoma is the commonest subtype. The usual treatment options for stage-IV NSCLC include palliative chemotherapy and/or radiotherapy. However, EGFR mutated adenocarcinoma has a newer treatment option such as targeted therapy which may have a good outcome. There are three types of targeted therapy: a) monoclonal antibody which blocks a specific target on the outside of cancer cells e.g. Cetuximab, Rituximab, Bevacizumab b) small molecules that inhibit tyrosine kinase activity e.g. Erlotinib, Gefitinib, Imatinib c) proteasome inhibitors which interfere with enzymes e.g. Bortezomib.

In April 2011, a 59 year old lady with both pleural and pericardial effusion was admitted to United Hospital. She was later diagnosed with adenocarcinoma of left lung with multiple vertebral metastases. She was given 3 cycles of chemo-

therapy along with I/V Zoledronic acid to improve bone health.

On 23 May, 2011 the patient had sudden onset of weakness in the upper limbs along with altered mental state. MRI of brain on the same day revealed multifocal cerebral infarctions. Considering



Fig: Comparison of PET-CT before and after chemo and targeted therapy.

the side effects, her chemotherapy was stopped and targeted therapy with Tab. Gefitinib 250 mg daily was started from 1 June, 2011 as her tumor was found to be positive for EGFR mutation at Exon 19.

PET-CT on 30 September, 2011 revealed

that the previously detectable tumor in the left lower lobe had largely resolved and increased uptake in the left pleura due to her previous pleurodesis procedure.

Patient started complaining of back pain and after reviewing the bone scan, EBRT to lumbar vertebrae (L1-L3) and ischial spine was given with a total dose of 3000cGy in 10 #. To reduce severe pain, Fentanyl trans-dermal patch was also prescribed.

Afterwards, PET-CT, MRI and bone scans were done several times and they showed multiple bony metastases without symptoms. Erlotinib was still

continued along with I/V Zoledronic acid at 4 week intervals, neurological medications and general supportive management. Apart from the neurological deficit, she remained ambulatory, without much symptoms and has been able to maintain a good quality of life so far.

SSMC Post Graduate Students Visit United Hospital

From Sir Salimullah Medical College Hospital, Professor Farhat Hossain with a team of twenty five post graduate students of the Obs & Gynae Department visited the Radiation Oncology Department in United Hospital on 19 March 2015. As a part of their teaching course, the students were given an overview on "Role of Radiation Therapy in the Management of Gynae Oncology" by Dr. A. F. M. Kamal Uddin, Visiting Consultant of United Hospital. They visited the Nuclear Medicine Department to see the PET-CT. Dr.

Rashid Un Nabi, Consultant, Department of Radiation Oncology gave a short lecture and a practical demonstration on radiation treatment facilities including Brachytherapy.



Redo Coronary Artery Bypass Grafting - Our Experience at United Hospital

Dr Rezaul Hassan, Dr Jahangir Kabir, Dr Zakir Hossain, Dr Saydur Rahman Khan

Repeat Coronary Artery Bypass Grafting (Redo CABG) in patients with ischemic heart disease is associated with high risk. CABG on cardiopulmonary bypass is associated with significant morbidity and mortality. We evaluate the result of reoperative (redo CABG) by either off-pump (OPCAB) or on-pump (ONCAB). Clinical end point was preoperative myocardial infarction,

mortality and survival.

We studied a retrospective assessment for patients who underwent redo-CABG by redo-OPCAB (n=13) or redo-ONCAB (n=5) at our institution between March 2007 to March 2014.

All patients survived. No in-hospital mortality. On average, conduits used in OPCAB and ONCAB were 2.7 and 2.8

per patient respectively. ICU stay in OPCAB & ONCAB was 3.4 and 3.7 days respectively. On average, hospital stay in OPCAB and ONCAB are 11.3 and 12.2 days respectively.

With our retrospective study, we could demonstrate the safety and efficacy of the redo-OPCAB technique. Both the techniques seem to have similar impact on patients.

United Hospital Organised Awareness Sessions in Different Corporate Houses



On World Cancer Day 2015 & as a part of Corporate Social Responsibility (CSR), United Hospital organised a **Health Awareness Session on Cancer** for the employees of Nestle (BD) Ltd. at their head office, Nina Kabbo, Tejgaon-Gulshan Link Road, Dhaka on Wednesday 4 February, 2015. Dr. Rashid Un Nabi, Consultant, Radiation Oncology Department of United Hospital did a presentation on "Cancer and Help Build Awareness Among the Audience". Mr. Stephane Nordé, Managing Director of Nestle (BD) Ltd. & Dr. Dabir Uddin Ahmed, Director Clinical Operations of United Hospital were present in the session and shared a few words on World Cancer Day 2015. Around 90 employees of Nestle (BD) Ltd. participated in the session.

On International Women's Day & as part of CSR activities, United Hospital organised an **Awareness Session on Breast**



Cancer on Sunday 8 March, 2015 for the female employees of Citibank N.A. at Gardenia Grand Hall, Gulshan, Dhaka. Around 50 female employees of Citibank N.A. including their senior officials were present in the session. Dr. Afsari Ahmed, Junior Consultant, Obstetrics & Gynaecology Department & Dr. Lubna Mariam, Junior Consultant, Radiation Oncology Department of United Hospital were the speakers of the session.

On World Kidney Day 2015, United Hospital organised several **Awareness Sessions on Kidney Diseases**. The 1st session was arranged on 12 March 2015 for the employees of Citibank N.A. at their

corporate office, Gulshan, Dhaka. Dr. M.A. Hamid, Specialist, Nephrology Department of United Hospital was the speaker of the session. On 16 March 2015, the 2nd session was arranged at Cemex Cement (Bangladesh) Ltd. at their corporate office, Baridhara, Dhaka. Dr. Muhammad Ehsan Jalil, Specialist, Nephrology Department of United Hospital was the speaker of the session. The last session was arranged at Grameenphone Ltd. on 24 March 2015 at GP House Microspectrum Hall, Bashundhara, Dhaka. Dr. M.A. Hamid, United Hospital's Nephrology Specialist was the main speaker of the session. Dr. Dabir Uddin Ahmed, Director Clinical Operations of United Hospital & Dr. Mohammad Shahnewaz, Head of HSSE Department of Grameenphone were present in the session and outlined the importance of World Kidney Day & present current status of kidney diseases in Bangladesh as well as in the world. Employees of the respective companies were present in those sessions.

A Case of Necrotizing Pancreatitis

Dr Tanjila Nawshin, Dr Mir Atiqur Rahman Sajal, Dr Md Maniruzzaman

This case is about a 59 year old hypertensive gentleman. According to the attendant's statement, he was reasonably well till 8 November 2013 when he developed severe abdominal pain with two episodes of vomiting. He was then taken to a local hospital. On 10 November 2013, he developed shortness of breath and his conscious level deteriorated. He was then intubated and kept on mechanical ventilator. CT scan of whole abdomen revealed acute necrotizing pancreatitis with diffuse collection in different spaces in the abdomen. On 19 November 2013, the patient was taken to United Hospital for further management and admitted into the GICU.

On admission in GICU, he looked toxic – Pulse: 85/min; BP: 105 / 79 mm of Hg, Temp: 101°F, R-R: 20 br / min, SpO₂: 94 % with FiO₂ 50%. His abdomen was distended, tense and bowel sound was absent. Auscultation of lungs revealed basal crepitations.

Patient underwent laparotomy followed by

pancreatic necrosectomy, fixation of closed cavity lavage system in lesser sac and cholecystectomy. Left paracolic, pelvic and right sub-hepatic drains were fixed. Irrigation of the closed cavity with peritoneal dialysis fluid started from 22 November 2013.

Weaning trial was done several times but failed as the patient developed hypoxaemia. Patient was continuously febrile. On 28 November 2013, he was extubated and kept on Bi-PAP intermittently for positive pressure support. He received breathing exercise and limb physiotherapy regularly as well as TPN.

In GICU, he developed fever and his WBC count was high. Tracheal Aspirate C/S showed growth of Acinetobacter. He received injections Carbapenam, Piperacillin, Colistin, Vancomycin and Netilmycin to counteract this new growth.

On 8 December 2013, he developed high fever, hypotension, hypoxaemia and

became drowsy. Patient was re-intubated electively and kept on SIMV-PC. His urine output became low, USG of W/A showed renal parenchymal disease. Renal function deteriorated with metabolic acidosis and SLED was given. Patient's LFT became abnormal and he got mildly disoriented. His S. Procalcitonin was 24.6 which indicated septic shock. Urine and peritoneal dialysis fluid C/S showed growth of Candida. He was given peritoneal flush with Amphotericin B and injection Xeroder I/V.

Abdominal clips and the sub-hepatic drain tube were removed. Feeding trial was given and tolerated. From 12 December 2013 he was haemo-dynamically stable. T-piece is an oxygen delivery device for tracheostomy patients. The patient was given T-piece trial which was satisfactory and accordingly the patient was extubated on 18 December 2013. He was conscious, mildly disoriented, haemo-dynamically stable, afebrile and was able to maintain SpO₂ in room air. He was then shifted from GICU to GHDU on 31 December 2013 as his condition was no longer life threatening.

Prevention of Pre-eclampsia

Dr Polly Ahmed, Dr Naseem Mahmud

Hypertension affects 7-15% of all pregnancies. Women with elevated blood pressure during pregnancy have a significantly increased maternal and foetal mortality and morbidity.

Prevention of pre-eclampsia can be theoretically achieved at primary, secondary or tertiary levels. Primary prevention is equivalent to avoiding the occurrence of disease which is impossible due to our limited knowledge about etiology and initial mechanism of the disease. Tertiary prevention is synonymous with treatment to avoid complications. Thus more effort to prevent PE is required in secondary prevention which consists of correcting the pathophysiology of the process to prevent onset of clinical signs & symptoms. The three preventive strategies more carefully studied during the last 15 years have been low dose aspirin administra-

tion, calcium supplementation & anti-oxidant administration.

There is substantial evidence indicating that an imbalance in the production of thromboxane A2 & prostacycline is an essential feature in the patho-physiology of PE. In pre-eclamptic patients, synthesis of prostacycline decreases & TxA2 production increases leading to vasoconstriction and platelet aggregation. Aspirin causes selective inhibition of cyclooxygenase pathway of PG synthesis, so there is decreased production of thromboxane. The evidence from systemic reviews indicates that low dose aspirin (75mg) has a moderate effect in the prevention of PE & its use in patients at high risk is justified starting at 16 weeks of pregnancy up to 2 weeks prior to the EDD.

Another attempt to modify the Tx/PI2 balance & decrease the incidence of PE

was fish oil supplementation but it failed in demonstrating the benefits in several control trials. Calcium supplementation may prevent PE by decreasing release of parathormone & consequently the intracellular calcium concentration resulting in decreased smooth muscle contractility. Possibility of Ca in preventing PE was borne of epidemiologic observation of a low incidence of this condition in populations with high Ca intake.

Patients of PE have an imbalance in the production of oxidative stress mediators due to diseased placenta. A small randomized clinical trial using vit C & E in women at high risk demonstrated a significant decrease in the incidence of PE in a treated group. But overall prevention of PE is disappointing. The only medication with some preventive effect in a selective sub-group of patients is low dose Aspirin.



Orientation Training on Influenza-A H1N1

Two days orientation training on Influenza-A H1N1, newly emerged EVD (Ebola Virus Disease), MERs CoV and Infection Control & Prevention was arranged from 11-12 March 2015 by Institute of Epidemiology, Disease Control & Research, Mohakhali (IEDCR). From United Hospital Dr Nusrat Jahan, Specialist, Medicine, Dr Mizanur Rahman, Specialist, Paediatrics, Dr. Mohammad A K Masood, MO, A&E and Dr. Sanjida Anjum, SHO, GICU attended the training. Practical demonstrations were done on Hand Washing and use of PPE (Personal Protective Equipments) and special emphasis was on Infection Control & Prevention of the diseases



How To Get Rid of Formalin

Chowdhury Tasneem Hasin

Formalin is a colorless chemical substance consisting of a mixture of formaldehyde, methanol and water. It is used for industrial purpose in textile, plastic, paper, paint and construction companies. It is well known for preserving human corpse. But the widespread use of formalin in preservation of fish, fruit and other food items is posing a threat to public health. If formalin is mixed with fish/meat, the formalin gets absorbed by the flesh and then converted into more rigid formaldehyde. The result is preserved meat or fish which can survive for a long time because formaldehyde prevents decay so the fish/meat will not rot. Formaldehyde is capable of killing

microbes or germs which are usually responsible for the process of decay.

Tips to know if a food item has been contaminated by formalin

- Fish - stiff with rubbery meat, hard scales, red gills and clear eyes. They won't have the "fishy smell" and no flies flying around.
- Fruits - light-yellowish color. The skin tends to be elastic with a drug-like or ash-like odor when in contact with hot water.

Formalin is a dangerous and toxic material for human health. If high quantity of formalin is ingested with food, the chemical will react with almost all substances in the cells and cause cell death resulting in poisoning. Formalin when ingested also causes stomach irritation, allergy, vomiting, blood diarrhea, blood in urine, carcinogenic effect (cancer causing effects), changes

in cell function/network, damage to kidneys and circulatory failure which can even result in death.

Formaldehyde is highly toxic to all animals, regardless of method of intake.

Tips to Eliminate Formalin in Food

Though formalin can be reduced but not fully removed, some easy & cheap ways are available which can be followed by just about anybody to treat the food before consumption.

- Fish can be soaked in two solvents - in water for 60 minutes which reduces formalin by 61.25 percent and in salt water which reduces formalin by 89.53 percent.
- Fresh fish can be soaked in vinegar for 15 minutes.
- Fruits can be soaked in hot water for 30 minutes eliminating almost 70% of formalin.

The Pathology Laboratory of United Hospital - A Symbol of Quality

The Pathology Laboratory of United Hospital Limited (UHL) went into operation in August, 2006 with a manpower strength of 24 personnel and only 5 major equipment. Since then, the laboratory expanded continuously so that now it is being manned by 87 persons and equipped with more than 30 fully automated equipment performing more than 357 test parameters and, on an average, 72,000 different tests per month. The Pathology Laboratory comprises most disciplines linked to patient care including clinical biochemistry, hematology, clinical microbiology, immunology and histopathology.

quality result for patient care.

All laboratory personnel follow Standard Operating Procedures (SOPs) for the performance of all assigned duties and tasks. Competency assessments are conducted and recorded for all components of the employee's functional responsibilities periodically and actions are taken as appropriate. Mechanism to identify gaps and laps and accordingly staff development program on the bench training and continuing education program are in place.

A standard laboratory information system (LIS) is present and it is a powerful tool to

(LMC), is formed with a view to achieve overall improvement of the laboratory and the services thereby. The LMC is composed of laboratory director, clinicians, physicians and laboratory staff. The LMC is a bridge between the laboratory and stakeholders. All matters relating to the laboratory and stakeholders are discussed on the LMC table.

Quality Control (QC) Program

Accuracy and precision of laboratory test results depend on stringent quality control measures. Laboratory results are being generated by automated analyzers and there is a notion that automated analyzers

contributing >80% errors resulting in non-conformity, non-compliance, unexpected or bad test results. So, quality control is a process where there is a need of compliance by the users, phlebotomists, receptionist and laboratory staff.

The pathology laboratory of UHL performs two QC programs

- i) Internal Quality Control (IQC)
- ii) External Quality assessment (EQA)

Internal Quality Control

IQC is a set of procedures undertaken by laboratory staff for the continuous monitoring of operations and the results of measurements in order to decide whether results are reliable enough to be released, and it is vital to achieve the analytical quality. IQC materials are run



made to the performance of a peer group of laboratories or to the performance of a reference laboratory.

EQA helps to assure customers, such as physicians, patients, and health authorities, that the laboratory can produce reliable results. Individual laboratories can use EQA to identify problems in

2013 for clinical chemistry, immunoassay, hematology, cardiac markers and coagulation screening. The Randox program is participated by more than 3,500 laboratories around the globe. After receiving the EQA results a discussion is held between the director of the pathology laboratory and the quality manager to review the performance. The problem areas are



The Pathology Laboratory essentially analyzes biological samples for diagnosis, treatment, follow up and drug monitoring and screening. Ideally such a laboratory is not only to provide accurate/acceptable result but also to do so within a reasonable turn around time. The laboratory follows a good laboratory practice which is not necessarily only to have standard laboratory procedure but to have respect of ethics and to ensure safety of patients with paramount importance, as well as, of staff who are involved in the processes.

Appropriately trained and skilled human resources are key to the successful operation of a clinical laboratory facility. Systems are in place to drive organizational structure and ongoing competency assessment to ensure appropriate accountability and communication during laboratory operation and thereby the

manage complex processes, ensure timely result and regulatory compliance. LIS is capable of consolidating complex technical processes into a single, compliant platform with comprehensive reporting, surveillance and networking capabilities. The system reduces the pre- and post-analytical mistakes and thus save man hour. LIS enhances data management and data sharing within the laboratory, across the laboratories and beyond the lab stakeholders in particular.

A technical management team named, Laboratory Management Committee

are expected to produce reliable results. In fact, this is not an appropriate notion. In laboratory testing process, there are numbers of steps, numbers of human involvements, many analytical requirements, reagents etc, and it is inappropriate to rely on this kind of notion. The possible errors or mistakes those can take place in the process of laboratory analysis of biological specimen are pre- and post- analytical avoidable mistakes

once in a day and the test results are validated based upon acceptable QC range assigned by the laboratory or manufacturer.

External Quality Assessment

The term EQA is used to describe a method that allows for comparison of a laboratory's testing to a source outside the laboratory. This comparison can be

laboratory practices, allowing for appropriate corrective actions. EQA participation helps to evaluate reliability of methods, materials, and equipment, and to evaluate and monitor training impact. It is mandatory for an accredited laboratory to participate in one of the well defined EQA program.

Randox International Quality Assessment Scheme (RIQAS) is a program for External Quality Assessment (EQA) organized by Randox. United Hospital signed an agreement with the local representative of Randox on 23rd August

identified and corrective actions are initiated and recorded.

Achievements

The Pathology Laboratory of UHL has achieved the ISO 15189:2012 accreditation on 4 December, 2014. The laboratory was also awarded with the certificate of acceptable performance for clinical chemistry program (2012-2013) by BIORAD, and, for cardiac markers, clinical chemistry, immunoassay, hematology and coagulation programs (2013 and 2014) by Randox.

The pathology laboratory of UHL is committed to provide prompt, efficient and reliable diagnostic services to the patients by utilizing best possible human resources, equipment, materials, techniques and laboratory practices. The objective is to make our laboratory a trusted and leading provider of clinical diagnostic services in Bangladesh in terms of test menu offered, and quality.



Rational Use of Blood and Blood Products

Dr Shazzad Hossain, Dr Md. Redwanul Huq, Prof Brig Gen (Retd) Zahid Mahmud

Transfusions can save lives. However, blood can transmit infections and is associated with adverse reactions and complications. Appropriate and rational use of blood products maximizes the benefits of transfusion and contributes to avoiding the risk of unnecessary allo-immunization and disease transmission.

Majority of the transfusions are carried out to raise the oxygen carrying capacity of blood. To achieve this, red cell concentrate transfusion is the best option- not the whole blood.

The shelf life of blood collected in CPD-A is 35 days. Transfusion on day 35 is as effective as a transfusion given on day 1 after donation.

Components produced from one unit of whole blood are: one unit of PRBC, platelet concentrate, fresh plasma or fresh frozen plasma, cryoprecipitate and cryosupernatant. Platelet concentrate,

granulocyte concentrate, red cell concentrate and plasma can also be prepared by apheresis technique. The same machine can be used for therapeutic plasma exchange.

Indications of whole blood and blood components:

Whole blood is indicated for actively bleeding patients with blood loss more than 25% and in exchange transfusion.

PRBC is suggested for acute and chronic anaemia, blood loss >20% of estimated total blood volume, in surgery - if patient has anemia or large amount of blood is lost.

Granulocyte concentrate is required in severe sepsis, specially Gram negative septicaemia and severe neutropenia (ANC: <0.50X10⁹/L).

Platelet concentrate is indicated if the patient's platelet count is less than

10X10³/μl irrespective of cause or if the platelet count is in between 10-30 X10³/μl and the patient is bleeding.

FFP is indicated in replacement of isolated factor deficiencies, massive blood transfusion (>1 blood volume within 24 hours), reversal of warfarin effect, antithrombin III deficiency, immunodeficiencies and treatment of thrombotic thrombocytopenic purpura.

Cryoprecipitate is required in fibrinogen deficiency, haemophilia A, Von Willebrands disease and factor XIII deficiency.

Transfusion is a safe and precious resource but it is important to avoid non-essential exposure. We should carefully choose what is actually needed for the patients. Most preventive hazards of blood transfusion occur due to wrong identification of patients and sub-optimal assessment and monitoring.

Course on Advanced Echocardiography

Dr Mohammed Helal Uddin

Echocardiography is one of the most important tools to evaluate patients non-invasively. A four day training program on Advanced Echocardiography organised by International Society of Cardiovascular Ultrasound (ISCU) in collaboration with JROP Institute of Echo, India was held this year at United Hospital from 26 February to 1 March.

There were 30 participants from different hospitals of Bangladesh and four legendary cardiologists from India who are experts in Advanced Echocardiography. The training program included

lectures on different topics of cardiology and live demonstrations on various patients. There was also a quiz competition on echocardiography on the third day of the session and the first three winners were awarded. On the last day, participants were given certificates for their active interaction in the program.

The main aim of this training program was to introduce advanced develop-

ment of Echocardiography such as 3D, Tissue Doppler and Strain Rate. The other objective was to improve physician's knowledge and technical skills to carry out Echo accurately according to the Echo guideline.



Broken Tooth Restoration

Dr Md Nazrul Islam

Ifti was playing on the bed and mom was in the kitchen. Suddenly mom heard a thud and loud crying, Oh my God...what happened??!! She rushed to the bedroom and found Ifti lying on the floor face down with blood all over her face. Her heart almost stopped and she quickly picked Ifti up. She was bleeding from her mouth and the front teeth looked different. She was quickly taken to a nearby hospital emergency

room. She had minor cuts on her lips but her front tooth was broken. This is a very common scenario for babies and toddlers. Broken teeth can be easily restored to almost normal look with tooth color composite restoration. The procedure is totally painless and requires no extra preparation of the teeth. If the patient is cooperative, then



Broken tooth before restoration



Broken tooth after restoration

it can be easily done even without local anesthesia. So if the same thing happens to your baby or anyone else, don't panic.....Just consult your dentist.

Importance of Hand Hygiene in Controlling Nosocomial Infections

Dr Kasekh Akhtar Jahan, Prof Brig Gen (Retd) Dr AFSA Wasey, Prof Brig Gen (Retd) Dr Zahid Mahmud

Nosocomial infection (NI) or hospital acquired infection (HAI) is a burning global issue occurring worldwide and affecting both developed and resource-poor countries. No health-care facility, no country, no health-care system in the world is free of this problem. They are a significant burden both for the patient and for public health sector.

The prevalence of nosocomial infection in developed countries varies between 5%-15% and it varies between 5.7%-19.1% in low and middle income countries (Fact Sheet, Health care associated Infections-WHO, 2013). They are one of the major causes of death and increased morbidity among hospitalized patients resulting in an estimated 20,000 deaths a year (Nguyen QV. Hospital acquired infections. Emedicine. 2004.)

United Hospital Limited has a comprehensive infection control program for the last 8 years and covers policies on hand hygiene, cleaning/disinfection/sterilization of medical instruments, environmental hygiene, waste management, infectious disease notification, isolation, and antibiotic usage. The policies laid down are evidence based on current recommendations from national and international societies and organizations. It also carries out surveillance program on nosocomial infection rate on a monthly basis as shown below.

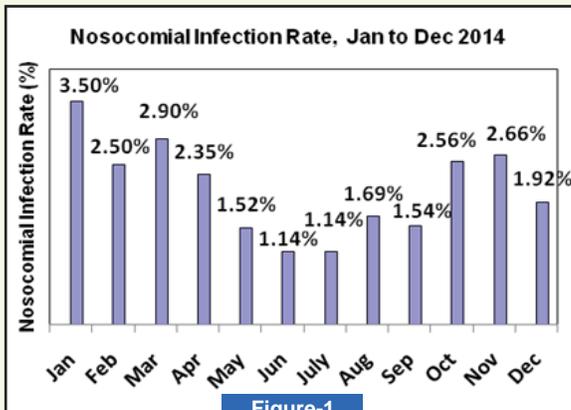


Figure-1

lower than the rate of NI all around the world.

The majority of NI were Respiratory Tract Infections (59.01%) mostly Ventilator Associated Pneumonia in the year of 2014. Other NI are manifested as Urinary Tract Infection (25.29%), Blood Stream Infection (11.91%) and Surgical Site Infections (3.77%) which are shown in Figure-2.

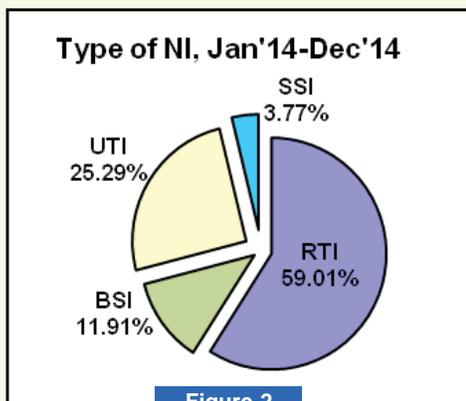


Figure-2

Klebsiella spp, Acinetobacter spp, Pseudomonas spp, E.coli and Candida were the predominant microorganisms causing NI in 2014 as shown in Figure-3.

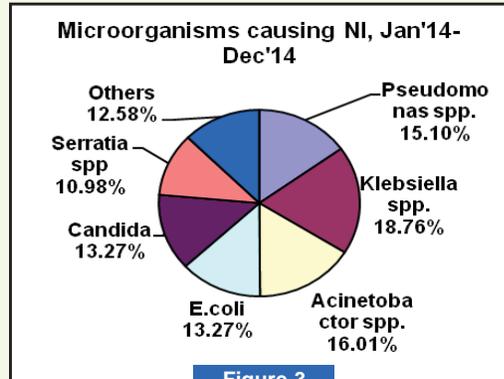


Figure-3

Transmission of health care-associated pathogens takes place through direct and indirect contact, droplets, air and a common vehicle. Transmission through contaminated Health Care Workers (HCW)

hands is the most common (about 50%) pattern in most settings (BMC Public Health 2009, 9:469). Despite the relative simplicity of the procedure, worldwide compliance with recommended hand hygiene practice by health care workers has remained suboptimal, with compliance rates generally below 50% of hand hygiene opportunities (Ann Intern Med. 1999; 130: 126-130) To address this problem, continuous efforts are being made and strong hand hygiene program is being carried out following WHO guideline within the hospital by the hospital infection control team. Alcohol based hand sanitizer is available at every bedside and hand washing sink with liquid soap and disposable tissues are placed in every unit. Hand hygiene posters of WHO are there in every unit to remind HCW to maintain hand hygiene. Hand hygiene compliance rate of hospital staff are also reported every month by the hospital infection control team.

Hand hygiene compliance rate in our hospital was almost 70% in 2014. Comparing the hand hygiene compliance rate with the nosocomial infection rate in our hospital, it was evident that nosocomial infection rate was minimum when hand hygiene compliance rate was maximum. The hospital infection control team is targeting to hit atleast 80% of hand hygiene compliance rate in the year 2015.

Presentation on Neuroradiology



Dr Umair Rashid Chaudhury, a renowned Interventional Neurologist, Head of Department, Neuroradiology, Lahore General Hospital, Visiting Professor of Radiology, University of Lahore, Pakistan and President of Pakistan Ozone Society as well as the Neuroradiology Section PPRC presented two topics (i) Initial Experience of Stroke Mechanical Thrombectomy and (ii) Non-Invasive Treatment of Spinal Disk in United Hospital on Sunday 8 March 2015. Total 25 Consultants, Specialists and Management Level Doctors from different departments attended.

Visits to United Hospital



- A delegation from Embassy of Federal Republic of Germany Dhaka led by Dr. Alexander Wex, Regional Medical Officer for South East Asia came to United Hospital to discuss with Clinical Management and also to see the existing hospital facilities on Tuesday, 20 January 2015



- A delegation from Saudi Arabian Airlines Dhaka office led by Mr. Essam A Almaimani, Country Manager, Bangladesh & Nepal of Saudi Arabian Airlines visited United Hospital regarding the recently signed MOU between Saudi Arabian Airlines and United Hospital Limited on Tuesday 3 February, 2015.

- A delegation from The World Bank Health Services Department, Headquarters, Washington, D.C USA led by Ms. Quinn McClean, Senior Medical Officer come to United Hospital on Tuesday, 3 February 2015.
- A delegation from Bangladesh German Chamber of Commerce & Industry (BGCCI), Dhaka office led by Mr. Simon Kierspel, Advisor Health Care of BGCCI, Dhaka along with a specialized doctor from Germany who worked for the Mayo Clinic in Minnesota, USA came to United Hospital on Monday 16 February, 2015.



- A delegation from Chevron Bangladesh, Dhaka office led by their Manager Ms. Sara Stratton New HES (Health Environment and Safety), Medical Supervisor & Medical Specialist visited United Hospital on Sunday 15 March, 2015.

Corporate Signing

Corporate Signing between Asian Travel and Medical Services (India) & United Hospital Limited was held on Saturday 24 January 2015.

Quality Health Management L.L.C (QHM), USA & United Hospital Limited signed an agreement on Monday 26 January 2015.

Fareast Islami Life Insurance Company Limited and United Hospital Limited signed an agreement on Sunday 1 February 2015.

Emergency Assistance Japan (Singapore) Pte. Ltd. & United Hospital Limited signed an agreement on Sunday 1 February 2015.

Cemex Cement (Bangladesh) Limited & United Hospital Limited signed an agreement on Wednesday 11 February 2015.

Q Life & Medical Insurance Company LLC, Qatar & United Hospital Limited signed an agreement on Sunday 1 March 2015.

First Security Islami Capital & Investment Limited & United Hospital Limited signed an agreement on Sunday 1 March 2015.

Seminars & Workshops

- A Scientific Seminar on "Recent Advances in General Surgery" was arranged on Thursday 19 February, 2015 at the Seminar Hall of United Hospital. Consultant Lt. Gen. (Retd.) Dr. A. K. M. Zafrullah Siddiq and Clinical Assistant Dr. A. H. S. Abul Ehsan from the General Surgery Department and Consultant Prof. (Dr.) Zahidul Haq from the General & Colorectal Surgery Department of United Hospital were the

speakers of the seminar. Dr. Abu Sayeed M. M. Rahman, Consultant, General Surgery & Director Clinical Development & Governance of United Hospital delivered the welcome address while Manager of Incepta Pharmaceuticals did a product presentation & gave vote of thanks to the participants of the seminar.

- A Scientific Seminar on "Recent Advances in Nuclear Medicine and Oncology" was arranged on Thursday

19 March, 2015 at the Seminar Hall of United Hospital. Consultants Dr. Ferdous Shahriar Sayed, Medical Oncology & Dr. M. A. Wahab, Nuclear Medicine were the speakers of the seminar from United Hospital. Prof. (Dr.) Santanu Chaudhuri, Director, Oncology Centre of United Hospital delivered the welcome address while Dr. Mahbubur Rahman, Sales Manager of Beacon Pharmaceuticals Limited did a product presentation & gave vote of thanks to the participants of the seminar.

Junior Girls Scout Visit United Hospital

On 1 March 2015, nine Junior Girls Scouts (age 9 to 11) from ISD and French School, Dhaka visited the Emergency Department of United Hospital. They were accompanied by Dr. Lisa Stevens, Infectious Disease Advisor USAID.



Fire Drill

On 23 & 24 February 2015, Fire Drill With Extinguishers Training for safety & protection was held in the hospital premise near the emergency gate. Around 88 staff from different departments attended the drill. Major (Retd) Md. Moinul Hossain, Manager Admin & Security gave a briefing to the participants and Capt. Md. Abul Hashem Bhuiyan, Admin Officer facilitated the fire extinguisher drill.

Annual Picnic 2015

Yearly picnic is a time where all hospital staff members look forward to relax and enjoy. Departments wait for that special day so that everyone can

participate in different programs and games with family members and colleagues. This year in this

quarter, four departments went for picnic and brief information on their activities are given below



- **Nursing** Department arranged a picnic at Shohag Palli on 16 January 2015 where 250 nurses and guests attended. They organized games and cultural programs that included songs, poetry and dances performed by nurses. At the end of the day the attraction was the lucky coupon draw and souvenir gifts for guests and children which were awarded by the CNO, Dr. Monette Barrento-Brombuela.
- Food and Beverage Department had their picnic in Monshigang on 16 January 2015 with 95 staff and their family

members. It was a long but comfortable & nice journey. The site view of the picnic spot was very attractive beside the Padma River with a beautiful garden. The F&B staff arranged a cultural program by the departmental members which included drama, reciting poems, magic show, comedy news, dance and songs which they all enjoyed. Raffle draw with gifts was arranged for all. The picnic ended with a memorable journey back to Dhaka.

- On 23 January, 2015 around 40 staff of the Customer Relations Department went for picnic to Fantasy Kingdom.

They had a fun-filled time going on all the rides as well as swimming and dancing in the Water Kingdom.

- On 13 February 2015, Department of Nuclear Medicine went to United City, Shatarkul for a picnic. Total of 40 members including special guests, family members, staff from other departments and their own staff enjoyed the picnic. They arranged different games like cricket, pillow passing etc and distributed prizes to the winners and souvenirs to all the members present.

Free Medical Camp on Independence Day at Munshiganj



United Hospital observed the Independence Day in a different manner this year. On the Occasion of Independence Day 26 March 2015, a group of 160 employees of United Hospital including 45 doctors 25 nurses, 15 Technologists & technicians from the disciplines of Cardiology, Oncology, Urology, Nephrology, Neonatology, Paediatrics, Medicine, Eye, ENT, Obstetrics & Gynecology departments and the employees from non clinical departments of United Hospital Limited organised a free medical camp at Yunus Khan-Mahmuda Khanam Memorial

Health Complex at Shamurbari, under Lohojong thana in Munshiganj district. The free medical camp was organized by Mr Faridur Rahman Khan, Managing Director of United Hospital Limited. Dr. Momenuzaman, Prof. Nurul Islam, Prof. Santonu Chaudhuri, Dr. Naseem Mahmud, Dr. Zahid Hasan, Dr. Md. Moshir Rahman,

Dr. Nargis Ara Begum, Dr. Kaisar Nasrullah Khan, Dr. A M Shafique, Dr. Afsari Ahmed were the key physicians from United Hospital. Beside the free medical consultation, all pathological tests, X-Ray, Ultrasound, ECG & Echocardiography were conducted and also free medicines provided among the patients. It was a pleasant trip for the doctors & other employees of United Hospital where they enjoyed the pollution free fresh air beside the river Padma and at the same time they provided consultations to around 800 patients of the surrounding areas of Munshiganj districts. A sumptuous lunch was arranged for the whole team.



We Congratulate the Newly Weds on the Auspicious Occasion of Their Marriage

- Medical Technologist Md. Sohel Rana of Radiology & Imaging Department got married to Senior Staff Nurse of Cardiac ICU (CICU) Sanjida Khatun (Badhon) of Nursing Department on 15 December, 2014.
- Senior House Officer Dr. Raina Tonny Jahan of Oncology Department got married to Dr. Sharif Bhuiyan on 16 December 2014.
- Nursing Department's Senior Staff Nurse Fatema Akter of Nuclear Medicine/Oncology Unit got married to Md. Sohel Rana on 22 January 2015.
- Nursing Department's Paramedic Brother Sumon Chandra Das of 6th FI Oncology Ward got married to Sumona Rani Roy on 26 January 2015.
- Nursing Department's Staff Nurse Aparna Halder of 6th FI Oncology Ward got married to Suprobir Mazumder on 30 January 2015.
- Nursing Department's Staff Nurse Shazeda Khatun of 6th FI Oncology Ward got married to Rashedul Islam Rashed on 13 February 2015.
- Laundry Attendant Shariful Islam of Housekeeping Department got married to Hosne Ara Begum on 13 February 2015.
- Senior House Officer Dr. Upal Basu of Oncology Department got married to Dr. Chaity Nath on 27 February 2015.
- Senior House Officer Dr. Md. Mahabub Hassan of Oncology Department got married to Dr. Farhana Hassan Mouri on 13 March 2015.



Congratulations & Best Wishes to the Following Staff and Their Spouses

New Baby

- Senior House Officer Dr. Sumaiya Binte Asif of Obs & Gynae Department had a baby girl Walisa Marium Ahmed on 10 July 2014.
- Nursing Department's Acting Unit Supervisor Ela Khanam of 4th FI had a baby girl Fatema on 17 October 2014.
- Nursing Department's Junior Nurse Christina Samadder of OPD 3 had a baby girl Gloria Annyna Sarker on 11 November 2014.
- Nursing Department's Staff Nurse Bernadette Hawee of Oncology Day Care Chemo Ward had a baby girl Aski on 8 December 2014.
- Nursing Department's Staff Nurse Most. Sahera Akhter of 3rd FI had a baby boy Tahshin Ahmed on 14 December 2014.
- Housekeeping Department's Attendant Rajib Hossain Raju had a baby boy Sakeel Ahmed on 31 December 2014.
- Nursing Department's Staff Nurse Most. Hosne Ara of Accident & Emergency Unit had a baby boy Samuel Islam (Orpon) on 6 January 2015.
- Nursing Department's Junior Nurse Mitaly Mondal of EHS/Family Medicine Unit had a baby girl Nidhi Shamantini Sarkar on 19 January 2015.
- Filing Assistant Joachim Gharami of Medical Records Department had a baby boy Rick Joseph Gharami on 23 January 2015.
- Customer Relations Supervisor Mohammad Ashiqur Rahman and Customer Relations Officer Asma Sultana had a baby girl Afia Zahin Rahman Saba on 24 February 2015.



Condolence & Prayers

- Specialist Dr. Nazmul Kabir Qureshi of Medicine Department lost his father Mr. M. A. Malek on 21 February 2015.

Tragedy

Patient Care Attendant Md. Rabiul Islam of Nursing Department was blessed with a baby girl Ramisa Jannat Raka on 26 October 2014 but very tragically she passed away from pneumonia on 25 January 2015 at the tender age of 3 months. We would like to extend our heartfelt prayers and deepest sympathy for the little baby, her parents and family members. May her soul rest in eternal peace and may the Almighty God give her parents strength to bear this excruciating loss.



Inter-Departmental Badminton Tournament December 2014



The annual Inter-Departmental Badminton Tournament 2014 was inaugurated by Mr. Najmul Hasan, Chief Executive Officer of United Hospital on Sunday 28 December 2014. The preliminary knockout matches of

this year's tournament started with the participation of 104 players in 52 Teams under four groups, representing different categories. The teams were divided according to age i.e (i) under 40 (ii) 40 to 50 (iii) above 50 and the fourth category comprised of female participants. All the games were played with considerable enthusiasm upto late in the evening, cheered by the respective supporters of each team.

Mr. Faridur Rahman Khan, the Managing Director of United Hospital was present as the Chief Guest to watch the final games and distribute prizes amongst the winners, runners-up & other officials on Thursday 29 January 2015.

The winners of the tournament were:

Group Ka (under 40): Mr. Sohel Mridha & Mr. Musfikul Alam Khandaker.

Group Kha (40 and 50): Mr. Tanvir Md. Ishteaq Banty & Mr. Syed Shah Wahidullah.

Group Ga (above 50): Mr. Najmul Hasan & Dr. Mahboob Rahman Khan.

Female Group - Ms. Fouzia Kuddus & Ms. Umme Salma.

In addition to the crests given to the winners and runners-up, medals were also given to referees, lines-men and other support staff, without whose support/ participation it would not have been possible to hold the tournament smoothly.

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