OVARIAN CANCER
Unlocking its mysteries and a survivor’s tale

A WEAK HEART STRENGTHENED
A baby boy who fought his way to better health
Dear Readers,

Milestone cases. Vibrant activities. New collaborations. The month of April was replete with eventful happenings for both the hospitals in Delhi and Mumbai. Like every month, we bring you yet another issue of Pulse with some of the interesting case studies and articles.

The cover story featured in this issue is from our group hospital Nanavati Super Speciality, Mumbai. It is a very informative piece on Ovarian Cancer wherein through a case of a survivor Dr. Sanjay Dudhat, Head of Department- Oncosurgery, discusses various ways to handle Ovarian Cancer. There are other inspiring stories in this issue that I am sure will be of great interest to you that include how a team of doctors in BLK nursed a 6 month old baby back to normalcy after a serious condition of heart failure. You will also find couple of cases on managing diverse types of heterotopic pregnancy as well as a remarkable case of removal of malignant ovarian tumour in a 19 year old young girl from Mumbai.

Last month, BLK Super Speciality Hospital had participated in the ‘3rd edition of Global Exhibition on Services (GES)-2017” held at India Expo Center & Mart, Greater Noida. And in this month again BLK will be participating in India Health Plus- Medical Tourism Expo which will be held in Dhaka, Bangladesh. The exhibition will focus on promoting India as the preferred medical and wellness destination for patients from across the globe.

Our editorial team would like to thank everyone who have been contributing to make Radiant Pulse much more meaningful. As always, we will be delighted to receive your feedback and suggestions. Our email remains the same as: editorial@blkhospital.com.

Stay healthy, stay happy!

FROM THE ED’S DESK
Matters of the Heart
Emergency surgery for Aortic Dissection

Dissection of aorta is a serious, life threatening condition. The underlying cause is often an inherent weakness of the aortic wall, increased stress on weakened wall due to hypertension or weakness in a particular part due to an atherosclerotic ulcer.

THE CASE
A 46 year old male with a history of transient loss of consciousness and complaints of severe chest and upper back pain accompanied by pain in the right lower limb visited BLK Heart Centre. His detailed examination revealed elevated blood pressure, absent pulses in the right lower limb and a normal ECG. This led to a suspicion of acute dissection. A CT Angio of the thoracic and abdominal aorta revealed type A dissection extending from the aortic root to the bifurcation, with the left renal artery arising from the false lumen and the dissection flap extending into the right common iliac artery severely compromising the flow. The patient underwent ECHO which revealed moderate AR.

THE PROCEDURE
The left femoral vessels were exposed and looped. A median Sternotomy was done, and Cardiopulmonary Bypass was instituted through the left femoral artery and right atrium. The aorta was entered after clamping. The aortic valve was structurally normal and the regurgitation was moderate. It was decided to repair the aortic valve by re-suspending its commissures. The entry of dissection or the initial tear was restricted to the ascending aorta. The ascending aorta from the root to the arch was replaced with a prosthetic graft. On the post operative day one, the kidney shut down and haemodyalysis had to be initiated to maintain fluid and electrolyte balance.

THE RESULT
Haemodynamics of the patient improved steadily and he was discharged on post operative day nine. The patient recovered well after discharge and the recovery was fairly uneventful. He is able to carry out his daily routine properly without any problem.

DISCUSSION
Surgery for Aortic Dissection and its complications is challenging, yet gratifying. If the procedure is performed with meticulous technique and at the right time, it can yield satisfying results.

A Challenge No More
Removing a Giant Tumour

THE CASE
A 19-year old unmarried girl visited Nanavati Super Speciality Hospital with complaints of abdominal distension and pain. On clinical examination, a mass arising from her pelvis, going up to her right hypochondrium abdominal distension was noticed. A CT scan was conducted that suggested the presence of a large multilocular multiseptate predominantly cystic mass arising from pelvis and extending up to upper abdomen of 19.7 x 10.3 x 26.1 cm in size. The imaging features depicted left side malignant ovarian mucinous cystic neoplasm and minimal free fluid in the pelvis area.

The mass effect on right lower ureter caused mild right hydronephrosis and hydrourter. The mass had displaced the uterus to the left and posterior. Further investigations were carried out which showed a very high Alpha Fetoprotein (AFP) result at 15694. Other investigations such as Beta Human Chorionic Gonadotropin (Beta HCG), Carcinoembryonic Antigen (CEA) and Carcinoantige (CA) showed normal results.

THE PROCEDURE
Post investigations, Exploratory Laparotomy was done which included removal of the left-sided tubo-ovarian mass measuring about 12 x 10 cm, weighing 3.3 kg. The entire mass was removed in totality and sent for histopathology.

THE RESULT
The right ovary and uterus were normal, the left sided mass was removed and the patient had an uneventful course in the ward and was discharged on post operative day eight. Suture removal was carried out on day ten.
Ovarian Cancer
Unlocking its mysteries and a survivor’s tale

Ovarian Cancer has emerged as one of the common malignancies affecting women in India, with nearly 30,000 new patients being diagnosed every year. Because of vague symptoms, lack of good screening methods, majority of the patients are diagnosed in stage III or IV. During the past decades, there were a lot of advances in surgical techniques (radical and debulking surgeries), newer and effective chemotherapeutic drugs and targeted therapies which resulted in improving survival rate and more effective treatment of relapsed disease.

THE CASES
A 58 year old female patient visited Nanavati Super Speciality Hospital with complaint of pain and heaviness in lower abdomen for about a month. She was investigated for the same after undergoing primary treatment. Sonography abdomen and pelvis showed cystic mass probably arising from right ovary. Further CT scan of abdomen and pelvis showed large solid cystic mass arising from right ovary without involving surrounding structures, omental thickening without any significant lymphadenopathy or peritoneal nodules. CA-125 level was 146 u/ml. After ascertaining her basic biochemical parameters, decision was taken to perform Exploratory Laparotomy with frozen section.

THE PROCEDURE
On exploration, large solid cystic mass replacing the right ovary, adherent to bladder peritoneum was visible. There was minimal free fluid in the pelvis and no significant lymphadenopathy or peritoneal nodules. Omentum did show significant nodularity. The right ovarian mass was dissected properly and was sent for frozen section. Frozen section reported high grade carcinoma arising from the ovary. Complete Radical Hysterectomy with Bilateral Pelvic Node Dissection, Para-aortic Lymphnode Sampling and Omentectomy were performed. Peritoneal biopsy and washings were also taken as surgical staging purpose.

THE RESULT
The patient’s post operative recovery was uneventful. Final histopathology report showed high grade seromucinous carcinoma of the right ovary with clear cell component and metastatic omental deposits, positive peritoneal fluid cytology and regional reactive lymphnodes. Post operative, Chemotherapy sessions were initiated.

DISCUSSION
Surgery plays an important role throughout the spectrum of Ovarian Cancer management. The surgery in early stage Ovarian Cancer entails total Abdominal Hysterectomy Bilateral Salpingo-oophorectomy, Omentectomy, Pelvic and Para-aortic Lymphadenectomy and comprehensive surgical staging. After adequate surgical staging nearly 30% patients are upstaged from stage I to stage III. Removal of the tumour should be completed without rupturing the capsule of the ovary because any spillage will upstage the disease. Spillage during surgery is an important prognostic parameter affecting the survival in major studies.

Cytoreductive surgery is removal of primary tumour and metastatic disease as much as possible so as to leave behind minimal or no residual disease. Chemotherapy will have much better effect when this hypoperfused masses are removed. Surgeons’ clinical judgement on whether to do Cytoreductive surgery or Neoadjuvant Chemotherapy to downstage the disease is quite critical in such cases.

Interval debulking surgery is performed by downstaging tumour after Neo-adjuvant Chemotherapy. In this type of treatment, first 3 cycles of Chemotherapy are given and the response is monitored. After assessing the response, the patient is operated upon. Post surgery, remaining 3 cycles of Chemotherapy are given. Conservative / fertility preserving surgery for early stage disease can be indicated in young women with low malignant potential tumours / well differentiated tumours confined to the ovary. These patients can be offered unilateral Salpingo-oophorectomy with comprehensive staging including Peritoneal Biopsies and Bilateral Pelvic and Para-aortic Lymphnode Sampling. Frozen section is essential for this procedure. Stage 1A disease has to be clearly defined. Careful monitoring is required since recurrence rates in such cases are around 7%. Uterus and remaining ovary should be removed after chances of pregnancy has been ruled out.

“Ovarian Cancer is the second commonest gynaecological cancer seen in Indian women. It has the highest mortality rate because of its late detection. Surgery remains main stay of the treatment. Efforts to develop new screening modalities for Ovarian Cancer should be the top priority.”
**Bringing Back A Hearty Smile**

An untiring team effort strengthens a weak heart

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**THE CASE**

A 6 month old baby boy was brought to BLK OPD with severe respiratory distress and signs of heart failure with altered sensorium. He was immediately shifted to PICU. He had severe metabolic acidosis with lactate of 7.9, and was immediately intubated and ventilated. ECHO showed dilated cardiomyopathy with severe LV dysfunction (EF 15%). Lab investigation showed hypocalcemia, raised CPK-MB, troponin I.

**THE PROCEDURE**

The child was immediately supported with inotropes and after 24 hours of admission, his clinical condition improved slightly. However, in the next few hours, his urine output started declining and he became anuric with metabolic acidosis and worsening lactates. His blood pressure dropped to a range of 40/20 mm Hg. Renal and liver parameters were markedly deranged. Peritoneal dialysis was started immediately and inotropes upgraded. The child remained critically ill and sustained on low blood pressure for few hours. Precise balance between preload and afterload status was maintained. In the next 24 hours, his blood gases showed improvement and blood pressure started stabilising. Gradually in the next 3 to 4 days, renal and liver functions normalised. Inotropes were tapered at a very slow pace and oral medications for heart failure were added. On day eight of admission, he was extubated onto HHFNC, which was subsequently weaned off.

**THE RESULT**

The hard work of the team comprising professionals from PICU and Nephrology unit finally paid off and smiles returned on the face of the baby boy and his parents. He returned back to his normal clinical status. His pre-discharge ECHO showed EF of 35% and he is doing fine post discharge as well.

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**Incidence of Rarity**

Primary Myelofibrosis converted into AML - M7

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**THE CASE**

A 62 year old man experiencing nasal bleeding and weakness visited Nanavati Super Speciality Hospital. His investigations revealed anaemia with leucocytosis and thrombocytosis. His was a known case of primary Myelofibrosis, a disorder in which normal bone marrow tissue is gradually replaced with fibrous tissue. He was prescribed oral Danazole tablet for his condition but in spite of its regular consumption he developed recurrent epistaxis. He had also undergone Splenectomy a year back at a local hospital.

On further investigations his bone marrow aspiration showed 80% blasts. Immunophenotyping revealed positivity for platelet precursor markers (CD41,CD61). These blasts were negative for other myeloid and lymphoid markers. His diagnosis was positive for Acute Myeloid Leukaemia with megakaryocytic differentiation (FAB AML M7).

**THE PROCEDURE**

A fraction of patients with Myelofibrosis progress to Acute Myeloid Leukaemia. But Medical and Haemato-Oncologists from Nanavati Hospital diagnosed this rare condition. Considering high risk factors present in this patient and taking into account his age and poor performance status, he was deemed unfit for Allogeneic Stem Cell Transplantation. Thus, Decitabine was started accordingly.

**DISCUSSION**

Myelofibrosis converting into AML is a very rare phenomenon but our expert Medical and Haemato-Oncologists diagnosed this rare condition. The identification of high risk factors of transformation to AML will allow for early therapeutic intervention and treatment.
Happiness Retained
Successful Management of diverse types of Heterotopic Pregnancy

Heterotopic Pregnancy is defined as the presence of multiple gestations, one being in the uterine cavity and the other outside the uterus commonly in the fallopian tube, and sometimes in the cervix or ovary. It can be a life threatening condition and can be easily overlooked during diagnosis. Timely diagnosis and intervention can save the life of the patient and also the intrauterine pregnancy. Three cases of Heterotopic Pregnancy were managed with successful outcomes (have mentioned first two successful cases here).

THE CASES
First Case: A 25 year old woman having 5.4 weeks of amenorrhea came in with right sided pelvic pain and clinical features of shock. Transvaginal ultrasound revealed single intrauterine live pregnancy of 5 weeks 5 days with a large complex heterogeneous irregular mass approximately 5.8 x 4.7 cm in the right adnexal region with moderate amount of free fluid in pelvis, suggestive of ruptured ectopic pregnancy.

THE PROCEDURE
The patient underwent emergency Laparotomy. There was ruptured right-sided tubal pregnancy with approximately 1000 cc of haemoperitoneum. A right Salpingectomy was performed and the patient received 2 units of blood. The intrauterine live gestation was allowed to continue. The patient delivered a healthy live baby at full term through caesarean section.

Second Case: A 23 year old woman was admitted with 8 weeks of amenorrhea, pain in abdomen and bleeding per vaginum since day one. Trans-abdominal ultrasound revealed single live foetus 6 weeks 2 days old with small subchorionic bleeds and a small solid mass adjacent to the left ovary. The patient underwent serial ultrasound on 7th and 15th day, which showed an increase in the size of the solid mass from 3.4 x 2.4 cm to 6.7 x 4.3 cm with intra uterine 8 weeks 4 days live pregnancy. In view of increasing size of left tubo-ovarian mass and patient being haemodynamically stable, a decision for 'Laparotomy and Proceed' was taken on the same day.

THE PROCEDURE
Excision of the tubo-ovarian mass with left side Salpingectomy and removal of blood clots was done. The tissue was sent for histopathology which confirmed conception thus corroborating the diagnosis of Heterotopic Pregnancy. The patient subsequently delivered a full term baby through vaginal route.

THE RESULT
With timely diagnosis and management, life-threatening complications of Heterotopic Pregnancy can be avoided and normal intrauterine pregnancy can be continued for a healthy mother and foetus.

Full article “Successful Management of diverse types of Heterotopic Pregnancies” is published in ‘Astrocyte’, April - June, 2016, Issue1, Vol.3.

Taming Pain the New Way
Percutaneous Radiofrequency Ablation for Osteoid Osteoma

Osteoid Osteoma is an extremely painful benign skeletal tumour seen mostly in young individuals. Anti-inflammatory medications have been traditionally used for the management of pain related to it. Although surgery is the definitive treatment, difficulty in lesion localisation and the need for extensive dissection poses a problem. Radiofrequency Ablation (RFA) has been found to be a safe, fast and reliable method of treating Osteoid Osteomas.

THE CASE
A 27 year old male visited BLK with complaints of on and off pain around his left hip for the past 12 months. His pain, usually worse during the night, showed symptomatic improvement with analgesics. On MRI investigation, it was diagnosed as Osteoid Osteoma of head and neck junction, and CT scan was done to confirm nidus. RFA was chosen as it was a difficult location to remove by open surgery because of the size and risk of AVN (Avascular Necrosis).

THE PROCEDURE
The lesions were localised with the help of a multidetector-row CT scanner. Multiplanar evaluation was done to confirm accurate needle position within the nidus. After skin preparation and proper sterilisation, local anaesthesia was administered with deep sedation. The position of the lesion, ease of access and the relationship with adjacent neurovascular structures were assessed. To minimise the possibility of thermal burns, the tip of the probe was inserted deep so that it did not lie near the skin surface. An 11-gauge bone biopsy needle was introduced into the lesion under CT guidance. Under aseptic precautions, a 12-cm long, 14-gauge side-deployment electrode was then introduced into the Osteoid Osteoma nidus through a coaxial system. The electrode was connected to the RF generator and the tip temperature was increased to 90°C. RFA was performed at 90°C for a minimum of 5 minutes. After the procedure, a small pressure dressing was applied at the percutaneous puncture site.

THE RESULT
Short term follow-up was excellent. The patient is now completely pain free and does not require any analgesic.

DISCUSSION
Difficulty in lesion localisation, the consequences of extensive dissection, the need for prolonged recuperation as well as the risk of incomplete removal and therefore recurrence of the lesion makes surgery a less desired option in the management of Osteoid Osteomas. RFA, on the other hand, has proved to be a safe, quick, and minimally invasive method of management.
EVENTS AND ACTIVITIES

BLK Event Calendar

1: BLK Super Speciality Hospital organised ‘Walk-A-Mile, It’s worth Your While’ campaign on 2nd April, 2017, a unique initiative to promote the benefits of walking for healthy bones and joints. The walkathon witnessed close to 1000 participants including Corporates, PSUs, Physiotherapists, Orthopaedicians, BWAs of neighbouring areas including Patel Nagar, Rajendra Nagar and Karol Bagh. | 2: 3rd Edition of Global Exhibition on Services (GES)-2017, held from 17th – 20th April 2017 at India Expo Center & Mart, Greater Noida | 3: Inauguration of Baketino - The BLK Bakers, at the BLK Super Speciality Hospital atrium.

Launch of Telemedicine Centre by Nanavati

NSSH partners with Legrand and CREATE (NGO) to launch telemedicine centre at Jalgaon “Aaroge E-Medical Center” on 28th March, 2017, under the CSR initiatives of Legrand. Various speciality medical camps such as Gynaecology, Nephrology, General Medicine, Neurosurgery and Orthopaedics were organised for a week. Around 800 citizens were benefitted and took guidance from the speciality doctors.

Awards & Accolades

Left to Right
Mr. Naresh Kapoor (Executive Director-Radiant Life Care), Contractual Worker of the Month - Mr. Vikash (Security Supervisor-Swift Securitas), GDA of the Month - Ms. Bindiya (Evershine), Doctor of the Month - Dr. Sanga Sahithya (Resident-Paediatrics), Employee of the Month - Mr. Suresh K S (Senior Executive-Purchase), Nurse of the Month - Mr. Manu Joseph (Ward In-charge-Nursing)

Nanavati Celebrates World Health Day

On the occasion of World Health Day, Nanavati Super Speciality Hospital organised a program "Out of the Blues" in line with the theme of Depression. Lectures were delivered by Psychiatrist, Psychologist and Counsellors from the Mental Health Department. More than 200 people were part of these informative sessions.