#### SHIFA BONE MARROW/ STEM CELL TRANSPLANT SERVICES

Since its inception in 2009, Shifa Bone Marrow Transplant (BMT) Program has transformed lives of hundreds of patients and given hope to countless families through performing 200 plus transplants including Autologous, Allogeneic (fully matched and half-matched HAPLO) transplants. The BMT team has been managing most challenging cases in the region including high-risk malignancies (Leukemia, Lymphoma, Myeloma and Germ Cell Tumors) and benign hematologic diseases (Aplastic Anemia, Thalassemia, PNH, etc.). Shifa BMT program is among 4 Pakistani centers registered with Center for International Blood and Marrow Transplant Research (CIBMTR) in Wisconsin, USA, to report outcomes.

Shifa BMT center has an 8-bed HEPA filtered unit, which is managed under supervision of Internationally trained consultants and an integrated team to provide exceptional nursing care, technical support, aphesis services, HLA typing, stem cell storage & processing, etc. Shifa BMT team has achieved remarkable outcomes comparable to USA at one-tenth of the cost in the West. With expansion to a pediatric arm in 2020, our aim is to increase the current number of 50 transplants a year to maximum capacity of 100 per year. Program is now accredited by CPSP for a Clinical Hematology Fellowship to train a new generation of physicians in Hematology and BMT. Through an updated database, outcomes of first 100 transplants were reported in Nature Journal "Bone Marrow Transplantation".

In collaboration with leading experts in the field, we are expanding horizons into new indications for transplant especially Autoimmune diseases such as Multiple Sclerosis. From thorough initial clinical consultation, seamless coordination, counseling, pre-transplant workup, comfortable stay at BMT unit and meticulous post-transplant care; the team is determined to provide best possible care and service to each patient.



## Liver Transplant Outreach Clinics at Quetta & Gujranwala

It is estimated that over 2.5 million people in Pakistan require Liver Transplantation at any stage during their treatment. Being part of Pakistan's leading Liver Transplant program, team at Shifa International Hospital has continuously been working to improve accessibility of quality healthcare to larger populations by facilitating patients from distant & far flung areas. Shifa International Hospital is also having an active liaison with other healthcare facilities in Pakistan to contribute towards capacity building & training of healthcare professionals in Liver Transplant & Hepatobiliary Surgery. In continuation of such initiatives, a one-day free Liver Transplant Filter Clinic was arranged at BMC Quetta on 2<sup>nd</sup> Nov, 2019 in collaboration with Departments of Social Welfare & Health, Govt. of Balochistan & Gastroenterology Department, Bolan Medical Complex Hospital, Quetta. Dr. Haseeb Haider Zia & Dr. Nusrat Yar Khan (Consultant Liver Transplant Surgeons) along with local affiliates examined more than 250 patients who visited the clinic from different cities of Balochistan.

Moreover, Shifa Liver Transplant team also arranged a one-day consulting clinic at Gujranwala on 16<sup>th</sup> November, 2019 in collaboration with Gut & Liver Center, Chaudhry Hospital Gujranwala. Dr. Haseeb Haider Zia & Dr. Abu Bakar Hafeez (Consultant Liver Transplant Surgeons) examined a large number of patients visiting from Gujranwala & surrounding areas of Hafizabad, Wazirabad, Sialkot, etc.







## **International Conference on Non Communicable Diseases**

The Pakistan Nutrition & Dietetic Society (PNDS) in collaboration with UK Nutrition Society (UK & Ireland) held their '1st PNDS International Conference on Non Communicable



Diseases' during November 1-3, 2019 at Lahore. His Excellency Dr. Arif Alvi, President of Pakistan graced the event as the chief guest. Dr. Rezzan Khan (Islamabad Chapter In-charge of the PNDS) and Ms. Zainab Ghayoor (Senior Dietitian SIH) helped the NCD organizing committee for event management. Dr. Rezzan Khan chaired the session on cancer and she was also the speaker for Obesity Management Workshop and among conference panelists.

### Shifa signs MoU with DRAP

Shifa Pharmacy Services act as a hub of medication safety related activities not only within the hospital but acts as a quality benchmark for other hospitals in this part of the country. Recently Shifa International Hospital signed a Memorandum of



Understanding with DRAP (Drug Regulatory Authority of Pakistan) in context to Shifa being declared as a first Sub-Regional center for Pharmacovigilance (PV) activities in ICT. Moreover in order to prepare and train other public and private hospitals in ICT and Rawalpindi (RWP) region, Pharmacy Department also hosted a hands-on training work shop on Pharmacovigilance, in collaboration with DRAP. The nominated focal persons for PV from ICT and RWP attended the workshop. Lastly on 20th November 2019, a foreign delegation from WHO along with officials from National Pharmacovigilance Center (DRAP) conducted a half day tour and inspection of Pharmacy Department in general, Drug & Poison Information Center in particular and evaluated the PV related activities conducted in the hospital. Dr. Nayar Mahmood (Chief of Medicine and Chair of Pharmacy & Therapeutic Committee), Salwa Ahsan (Chief of Pharmacy) and her team facilitated the inspection. WHO team highly commended the activities undertaken and remarked as "Fantastic and Impressive".



Applause

Dr. Muhammad Sohaib has recently completed Upper GI & Bariatric Surgery trainings from Germany, which makes him first European qualified Upper GI Surgeon (FEBS/ UGI Surgery) in Pakistan.







Shifa International Hospital observed 'World Antibiotic Awareness Week' from 18<sup>th</sup> to 24<sup>th</sup> November 2019, with the aim to increase awareness of antibiotic resistance and to encourage best practices among the general public, health workers & policy makers to avoid the further emergence & spread of antibiotic resistance. The week included floor to floor education, awareness walk in collaboration with National Institute of Health, Islamabad, Pakistan & an awareness seminar on appropriate antibiotic use by the experts, Dr. Ejaz A. Khan (Consultant/ Chief of Peads & Chairman Infection Control Committee, SIH), Dr. M. Usman (Consultant Microbiologist, SIH), Salwa Ahsan (Chief of Pharmacy, SIH), Dr. Mumtaz Ali Khan (SMO, National Institute of Health, Islamabad), Ruth Samuel (Manager Prevention and Infection Control, SIH), & Komal Fizza (Associate Manager Pharmacy, SIH).

## **Glimpses of World Diabetes Day Seminar**

prevalence in Pakistan Rises up to **19%:** *Expert*s

Diabetes

"Living with Diabetes is an opportunity to strengthen your willpower and improving self-discipline to defeat the disease"

Senator Khush Bakht Shujat, (Chief Guest)

orld Diabetes Day is a primary global awareness campaign focusing diabetes & is held on 14 November each year worldwide. According to Pakistan Endocrine Society, overall diabetes prevalence in Pakistan is 19% and over 522 million people are currently living with diabetes globally. 1 in every 2 people worldwide, currently living with diabetes is undiagnosed. As per International Journal of Pharmacy & Pharmaceutical Sciences (2014), the average cost of basic diabetes related expenses in Pakistan excluding consultation fee and medical tests was Rs. 5,542 per month, per patient.

Shifa International Hospital observed the day by arranging an awareness seminar. The Chief Guest Senator Khush Bakht Shujat (Chairperson, Senate Standing Committee on NHSR & C) while addressing the seminar to commemorate World Diabetes Day, said that the theme of the day in 2019 is about protecting your family by raising awareness of the impact of diabetes & promoting the role of the family in the management, care, prevention & education of diabetes. She stressed the need to educate the communities to restrain inactive life style, unhealthy eating habits & lack of exercise, which are among major controllable factors to prevent diabetes prevalence. She emphasized that, early diagnosis & treatment are key elements to prevent the extra financial burden, complications of diabetes & achieve healthy outcomes.

Consultant Endocrinologist at Shifa International Hospital, Dr. Osama Ishtiaq, said that, mostly the diabetic cases are of type 2 diabetes, which is largely preventable through regular physical activity & balanced diet. Type 1 diabetes is not preventable but it can be managed with insulin injections. Consultant Endocrinologist SIH, Dr. Umar Yousaf Raja explained that, Diabetes is a chronic disease that occurs when pancreas is no longer able to make insulin, or when the body cannot make good use of the insulin it produces. Long-term high glucose levels are associated with damage to the body & failure of various organs & tissues. Diabetes is a leading cause of heart disease, stroke, blindness, kidney failure, & lower limb amputation. Dr. Manzoor H. Qazi (CEO, SIH), Dr. Zeeshan Bin Ishtiaque (Medical Director, SIH) & Mr. Taimoor Shah (COO, SIH) thanked the honorable chief guest & audience for their valued participation.





### **Masterclass in Pulmonology and Critical Care**

Shifa International Hospital organized a Masterclass in Pulmonology and Critical Care on November 17, 2019, which was designed to improve care delivery not only in ICUs but also to critically ill patients in other areas such as emergency rooms, post-operative care units and in disaster settings. Speakers of the day were Dr. Aftab Akhtar



(Consultant/ Head of Department, Pulmonology & Critical Care), Dr. Aayesha Qadeer (Associate Consultant, Pulmonology & Critical Care), Dr. Sheher Bano (Assistant Consultant, Pulmonology & Critical Care), Dr. Tooba Mehreen (Fellow, Pulmonology & Critical Care), Dr. Maria Habib (Fellow, Pulmonology & Critical Care), Dr. Azmat Abdullah (Fellow, Pulmonology & Critical Care), Mr. Zafar Khattak (Cancer Registrar), Dr. Ghulam Rasheed (Fellow, Pulmonology & Critical Care), Dr. Ahtesham Iqbal (Fellow, Pulmonology & Critical Care), Dr. Moazma Ramzan (Fellow, Pulmonology & Critical Care), Dr. Hafiz Ghulam Murtaza (Fellow, Pulmonology & Critical Care), Dr. Nasir Javed Rana (Fellow, Pulmonology & Critical Care). While addressing the masterclass, the Chief Guest, Dr. Monette Barrento Brombuela (Chief Nursing Officer) stressed the need to educate our medical staff in the field of pulmonology and critical care.

## **Master Class in Vascular Access Surgery**

A masterclass in Vascular Access Surgery (AV Fistula) is another initiative of Shifa International Hospital, which was organized on November 24, 2019 and was designed to improve the diagnosis and management of patients. Speakers of the masterclass were Dr. Tahir Hussain (Consultant Vascular Surgeon, SIH), Dr. M. Mussadiq Khan (Consultant General Surgeon, SIH), Dr. Ahsin Manzoor Bhatti (Consultant General Surgeon, CMH Lahore), Dr. Muhammad Waqas Raza (Consultant General Surgeon, BBH, Rawalpindi), Dr. Atif Rana (Consultant & Chief of Radiology, SIH), Dr. Danyal Hassan (Consultant Nephrologist, SIH), Dr. M. Athar Khawaja (Consultant Urologist & Kidney Transplant Surgeon, SIH), Dr. Omer Ehsan (Consultant Vascular Surgeon, SIH) and Dr. S.M. Azeem (Fellow Vascular Surgery, SIH). While addressing the masterclass, Prof. M. Iqbal (Consultant General

Surgery, SIH) encouraged training and practicing Vascular Surgeons, General Surgeons and Urologists to focus more towards preventive measures to improve the diagnosis and management of patients.



## Workshop - Endovascular Aortic Repair

Shifa Medical Staff Affairs organized a workshop on 'Endovascular Aortic Repair' on November 23, 2019. Prof. M. Iqbal Khan (Vice Chancellor, STMU) welcomed the speakers and participants and appreciated the management team for organizing the workshop in this rare field. Workshop was designed in a way to address the aortic disease, patient selection, focusing on the guidelines of endovascular aortic repair, EVAR planning procedure and screening of Aortic Aneurysm that was followed by the handson session. Speakers of the workshop were Dr. Omer Ehsan (Consultant Vascular Surgeon, SIH), Dr. Kamal Yusuf (Consultant Vascular Surgeon, Liaqat National Hospital, Karachi), Dr. Naseem Haider (Consultant Vascular Surgeon, Quaid-e-Azam International Hospital, Islamabad), Dr. Jamshaid Anwar (Consultant Interventional Radiologist, SIH), Dr. Zia Ur Rehman



(Consultant Vascular Surgeon, Agha Khan University Hospital, Karachi) and Dr. Fahad (Consultant Vascular Surgeon, Trauma Center & Civil Hospital, Karachi).



## A Segment featuring Expert Opinion on different **Health & Wellness Topics**





Dr. Muhammad Ayaz Mir, Consultant Hematologist, SIH

#### Q: What are the indications of Bone Marrow Transplant?

A: Bone Marrow or Hematopoietic Stem Cell Transplant (HSCT) can be offered in several types of diseases. These include benign disease in which Bone Marrow (the factory that produces all types of blood cells) is not functioning (such as Aplastic Anemia) or functioning inadequately (such as Thalassemia or Myelodysplastic Syndrome). It is curative for many cases but not all cases of Blood Cancer (Leukemia, Lymphoma, Myeloma, etc.). There is increasing & promising data in Stem Cell Transplant for several autoimmune diseases as well as Multiple Sclerosis, SLE & Systemic Sclerosis.

#### Q: What are the types of Bone Marrow Transplant?

A: Bone Marrow/ HSCT can be Autologous (patients' own Stem Cells) or Allogeneic (related or unrelated Donor Stem Cells or Cord Blood Cells). It can be fully matched (HLA identical) or halfmatched (HAPLO-identical).

#### Q: What is the difference between a Bone Marrow & a Stem Cell Transplant?

A: When Bone Marrow Transplant (BMT) was initially invented in 1950s & 60s, Stem Cells were only thought to exist in bone marrow and essentially all transplants were carried out by harvesting donor bone marrow in operating room under anesthesia and implanting it into the recipient. In later years, drugs & techniques evolved that could stimulate these stem cells to leave bone marrow niches & come into blood where they can be filtered by a special machine (Apheresis) & infused like a transfusion. This is increasingly more common & today more than 95% of all transplants are Stem Cell Transplants.

#### Q: What are the risks & benefits of BMT/HSCT?

A: BMT/ HSCT is curative in approximately 80% cases of Aplastic

Anemia, 70% cases of Thalassemia (especially if age is less than 7 years) & 50-60% cases of Blood Cancer. There is a mortality risk of less than 5% with Autologous & approximately 10% with Allogeneic transplant. Three major complications of transplant are Infection, Graft-Vs-Host Disease (<30%) & Engraftment Failure (<5%). Disease relapse can unfortunately occur in 15-30% cases depending on underlying disease.

#### Q: Is Bone Marrow Transplant procedure same for the children as adults?

A: Children less than 10 years of age are an especially challenging population due to different dosage requirements of drugs, transfusion products, nursing etc. but procedure is essentially the same.

#### Q: After how much time do patients recover?

A: Most patients have a hospital stay of 3 to 4 weeks & are able to return to daily activities in 1 to 3 months.

#### Q: What are the unique features of Shifa BMT Program?

A: Of the 4 transplant programs in the country, Shifa BMT Program is the most rapidly growing program. We went from average of 15 transplants per year since 2009 to 50 per year in last 2 years. As compared to other programs, 90% of our patients have cancer as indication of BMT/ HSCT which includes many challenging cases that are denied by other centers. We also offer the most economical packages (2 to 2.5 million rupees) as compared to 3-5 million rupees (an average BMT cost in Pakistan). Our best asset is our team. From US-trained transplant physicians & excellent HLA/Apheresis support, nursing and our HEPA filtered state-of-the-art unit, we are comparable to any US Center.







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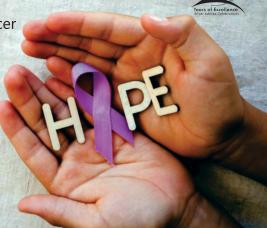


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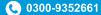


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