HAEMATOLOGY UPDATES

Vol. 11, No. 4, October-December 2017

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President's Column

Our Dear Colleagues
Assalam-o-Alaikum,

My special thanks to all of you for your very welcoming response and confidence to Pakistan Society of Haematology. I request to all of you to pray Almighty Allah to Give Health, Courage and Strength to fulfill this obligation.

Alhamdolillah we have finalized the Working Groups of PSH for different sections of Haematology, BMT, Coagulation, Haemostasis and Transfusion Medicine to formulate guidelines, in local prospective for better diagnosis and management of blood diseases. We have started a long awaited dream of haematology registry for different diseases. As a first drop of rain, Bone Marrow Transplant Registry have started and we are very thank full to our PSH Rawalpindi/ Islamabad Chapter for their untiring efforts. We have planned to start further registries of haematological diseases. We have signed memorandum of understandings and collaboration with International Society of Laboratory Haematology (ISLH) and International Society of Haematology (ISH) and international society for thrombosis and Haemostasis (ISTH).

We all know this is the era of multidisciplinary team management and evidence based medicine. We need a very close coordination and support of different disciplines for better patient care. We should strat our preparations for upcoming mega event of 20th PSH meeting Haemcon 2018, to be held on March 01-04, 2018 at Pearl Continental Hotel Rawalpindi.

Alahamdolillah we have introduced "PSH Bright Scholarship" for emerging haematologist for training within Pakistan and Abroad, interested PSH member can get full information on PSH website.

Last but not the least, my dear friends the strength of our organization lies in unity. Let us remain united in achieving our goals. Also increase the new memberships of budding haematologist to increase the family of PSH. In think I should stop here and Insha-Allah rest will be discussed in next updates.

With Thanks & Allah Hafiz

Prof. Dr. Nisar Ahmed,
President,
Pakistan Society of Haematology

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About PSH

Pakistan Society of Haematology was formed in 1996 with the aim of promoting advancement of haematology, BMT and transfusion medicine in the country. Presently it has more than 350 members and we all should make efforts to enroll every haematologist in the country. We request all our members to take special interest in extending the membership to all those haematologists around you who have not yet registered with PSH. Website was launched and has been very active in recent past. We are trying to rejuvenate the website "http://www.psh.org.pk. The website would be interactive and provide on line forum for sharing views with other haematologists, and case discussion with the experts. Other features will be facility to download online membership form, newsletter, list and addresses of the members. Hopefully the website will be more operational within this month InshaAllah.

PSH History

Gen Masood Anwar

1. PSH was raised as "Pakistan Society of Haematology/Transfusion Medicine (PASHT)" in 1991. A meeting was held at 5 pm on Friday Nov 22, 1991. Professor Dr Mohammad Khurshid, Brig(later Lt Gen) Muhammad Saleem, Dr Khalid Zafar Hashmi, Dr Nasim Siddiqui, and Dr Abdul Hayee attended the meeting as members in presence of Prof A. V Hoffbrand. In this meeting Dr Khurshid presented a brief outlay of the necessity to create such a society. He also pointed out that Dr. Abdul Hayee, Dr. Khurshid, Dr KZ Hashmi and Brig Saleem had met at Bahawalpur and agreed on the general principles that the first meeting would be held along with the International conference of Pathology.
2. Though initial work was comprehensive, governing body and meetings of PASHT were not held regularly. In Sept 1994 it was proposed by Gen Muhammad Saleem to meet all PASHT members during Pakistan Association of Pathology (PAP) conference at Quetta. Dr. Muhammad Khurshid in consultation with Gen Saleem, Prof. Abdul Hayee, Dr. Khalid Zafar Hashmi proposed a provisional constitution of PASHT for the discussion in meeting
3. Haematologists from all over the country met on Saturday 9th March 1996 at Hotel Pearl Continental Rawalpindi in order to form a society. It was unanimously agreed that official name of society will be "Pakistan Society of Haematology" with official abbreviation of "PSH". It was also decided that until elections for office bearers the society matters will be looked after by a committee as under
    a. Dr. Muhammad Khurshid
    b. Dr. Ehsan-ul-Allah
    c. Dr. Abdul Hayee
    d. Dr. Khalid Zafar Hashmi
    e. Dr. Khalid Hassan
    f. Dr. Masood Anwar will act as Co-ordinator

4. A general body meeting of PSH was held at Peshawar on 2nd and 3rd Nov 1996. Election for office bearers were carried out as follow
    a. Lt. Gen. Muhammad Saleem President
    b. Prof. Muhammad Khurshid as Vice President
    c. Dr. Khalid Hassan as Secretary/treasurer

Later in Oct 1997 appointment of vice president was renamed as president elect.

List of past presidents includes

1. Prof. Dr. Abdul Hayee
2. Prof. Dr. Abdul Khaliq
3. Prof. Dr. Muhammad Khurshid
4. Prof. Dr. Khalid Zafar Hashmi
5. Maj. Gen. Masood Anwer
6. Prof. Dr. Khalid Hassan
7. Maj. Gen. Suhaib Ahmed
8. Prof. Dr. Samina Naeem
9. Gen. Muhammad Ayyub

List of past secretaries includes

1. Dr. Khalid Hassan
2. Maj. Gen. Massod Anwar
3. Prof. Fazle-e-Raziq
4. Dr. Salman Naseem Adil
5. Dr. Shaheena Kauser
6. Brig. Nadir Ali
7. Maj. Gen. Pervez Ahmed
8. Dr. Nadeem Ikram
9. Dr. Humera Rafiq
10. Brig. Tariq Mehmood Satti

5. PSH was registered with Govt of Pakistan on 8th August 1998(RS/ICT/298 dated 8 Aug 1998 as non political and non sectarian body to promote advancement of haematology including transfusion medicine through encouragement of research, teaching and technical methods. The body will also organize scientific meetings, publication of scientific material, and affiliation with other National and international organizations. Members of Governing body included

    a. Lt. Gen. Muhammad Saleem as President
    b. Dr. Khalid Hassan as General secretary
    c. Dr. Birgees Mazhar Qazi as member
    d. Dr. Waseem Iqbal as member
    e. Dr. Hassan Abbas Zaheer as member
    f. Dr. Mobina Ahsan Dhodhy as member
    g. Dr. Farah Yasin as member
    h. Col. Masood Anwar as member

It was also decided that First National conference will be held on 4th Oct 1998. Since then Annual conference is held regularly in all capital cities of Pakistan. The society is publishing a quarterly newsletter and providing a forum to the haematologists all over the country contributing as advisors in haematology, consultants, researchers and mentorship. Currently the Governing body includes

- Prof. Dr. Nisar Ahmed as president
- Gen. Parvez Ahmed as President elect
- Dr. Saima Farhan as Secretary

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SCHEDULE OF PSH MONTHLY MEETING

City	Coordinator Name	Date	Time
Lahore	Dr. Muneeza Junaid	2nd Tuesday of the Month	09:00am to 10:00am
Karachi	Dr. Bushra Moiz	Last Friday of the Month	08:00am to 09:00am
Quetta	Prof. Nadeem Samad Shaikh	Last Friday of the Month	09:00am to 10:00am
Rawalpindi/ Islamabad	Brig. Ch. Altaf Hussain	Last Thursday of the month	03:00pm to 05:00pm
Peshawar	Dr. Shah Taj Khan	3rd Thursday of the month	1200pm to 01:00pm

EXECUTIVE COMMITTEE

New Executive committee was elected during 19th Annual Conference of Pakistan Society of Haematology held at Lahore from 16th-18th February 2017.Following are the office bearers of executive committee.

PRESIDENT
Prof. Dr. Nisar Ahmed
0300-4330196
dr_nisarahmed@hotmail.com

PRESIDENT ELECT
Maj. Gen. Pervez Ahmed
0300-8561288
parvez101@yahoo.com

SECRETARY/TREASURER
Dr. Saima Farhan
0300-2408440
dr_saima99@yahoo.com

MEMBERS

ARMED FORCES
Brig. Ch. Altaf Hussain
Brig. Maqbool Alam
Brig. Saqib Qayyum

ISLAMABAD
Prof. Dr. Ayesha Junaid

PUNJAB
Dr. Muneeza Junaid
Dr. Manzoor Hussain
Prof. Dr. Arif Hussain

SINDH
Prof. Dr. Muhammad Irfan
Prof. Dr. Salman Naseem Adil
Dr. Muhammad Nadeem

BALUCHISTAN
Prof. Dr. Chandi Kapoor

KPK
Dr. Shah Taj Khan

AZAD KASHMIR
Dr. Zahida Qasim (Mirpur)

OFFICE ASSISTANT
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OFFICE ASSISTANT
Mr. Abdul Aleem
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NATIONAL PSH COORDINATORS

RAWALPINDI/ISLAMABAD
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LAHORE
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0333-8029026
dr.mjunaid10@gmail.com

PSH WORKING GROUP

It is my pleasure to inform you that Haematology in Pakistan is progressing at a fast pace. In the first executive council meeting which was held at Lahore office, the proposal of making working groups was unanimously approved and now has taken up shape. The various working groups with nominated lead person along with members are hereby published.

Whoever wants to be a part of any group is here by advised to get in contact with the lead person.

These working group are as under

Dr. Saima Farhan
Secretary / Treasury PSH

I. Working Group JPSH (Journal of Pakistan Society of Haematology

Lead Person: Prof. Dr. Khalid Hassan
Cell: 0333-5178210
Email: kh_pims@yahoo.com

- **Members:**
  - Prof. Dr. Shahida Mohsin
  - Dr. Bushra Moiz
  - Dr. Nadeem Ikram
  - Brig. Nadir Ali
  - Dr. Anum Wasim

II. Working Group Blood & Marrow Transplant

Lead Person: Maj. Gen. Parvez Ahmed
Cell: 0300-8561288
Email: parvez101@yahoo.com

- **Members:**
  - Maj. Gen. Tariq Mehmood Satti
  - Prof. Dr. Salman Naseem Adil
  - Brig. Qamar-un-Nisa Chaudhry
  - Dr. Saima Farhan
  - Col. Mahren Ali

III. Working Group Academic/ Curriculum Development:-

Lead Person: Gen. Saleem Ahmed Khan
Cell: 0333-7816441
Email: saleem003@hotmail.com

- **Members:**
  - Maj. Gen. Parvez Ahmed
  - Prof. Dr. Salman Naseem Adil
  - Prof. Dr. Nisar Ahmed
  - Dr. Bushra Moiz
  - Brig. Nuzhat Salamat
  - Dr. Shah Taj
  - Dr. Saima Farhan

IV. Working Group Scholarship and Financial Aid:-

Lead Person: Brig. Nuzhat Salamat
Cell: 0321-8514354
Email: nuzhatsalamat@yahoo.com

- **Members:**
  - Dr. Lubna Zafar
  - Dr. Muneeza Junaid
  - Dr. Saima Farhan
  - Dr. Tariq Ismail

V. Working Group Transfusion Medicine:-

Lead Person: Brig. Maqbool Alam
Cell: 0321-5196521
Email: maqboolalam448@hotmail.com

- **Members:**
  - Prof. Dr. Hassan Zaheer Abbas
  - Dr. Saba Jamal
  - Dr. Ayesha Junaid
  - Dr. Zahida Qasim
  - Dr. Manzoor Hussain
  - Dr. Saima Farhan
  - Dr. Nazish Saqlain

VI. Working Group Paediatric Haematology:-

Lead Person: Prof. Dr. Nisar Ahmed
Cell: 0300-4330196
Email: dr_nisarahmed@hotmail.com

- **Members:**
  - Lt. Col. Tariq Ghafoor
  - Dr. Aslam Shaikh
  - Dr. Tooba Fateen
  - Dr. Faiza Rafiq

VII. Working Group of Coagulation Medicine:-

Lead Person: Brig. Ch. Altaf Hussain
Cell: 0333-5464272
Email: altaf444@gmail.com

- **Members:**
  - Prof. Dr. Mona Aziz
  - Prof. Dr. Samina Amanat
  - Prof. Dr. Arif Hassan
  - Brig. Saqib Qayyum
  - Dr. Naghmana Mazhar
  - Dr. Jaweria Fatima

VIII. Working Group Benign Haematology:-

Lead Person: Prof. Dr. Muhammad Irfan
Cell: 0300-8270189
Email: Irfan6697@gmail.com

- **Members:**
  - Prof. Dr. Nadeem Samad Shaikh
  - Prof. Dr. Mubeena Dhodi
  - Prof. Dr. Ayesha Ehsan
  - Dr. Usman Shaikh
  - Col. Nighat Shahbaz

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IX. Working Group Malignant Haematology:-

Lead Person: Maj. Gen. Tariq Mehmood Satti
Cell: 0336-4243525
Email: tariqsatti@yahoo.com
Members:
- Dr. Nadia Sajid
- Col. Nighat Shahbaz
- Dr. Muhammad Idrees
- Dr. Irum Iqbal
- Dr. Hayat-ul-Allah

X. Working Group Molecular Haematology:-

Lead Person: Maj. Gen (R). Suhaib Ahmed
Cell: 0333-56231478
Email: suhaib955@hotmail.com
- **Members:**
  - Dr. Jaweria Ejaz
  - Dr. Bibi Kulsoom
  - Col. Muhammad Naeem
  - Dr. Saima Mansoor
  - Dr. Ayesha Khalid

XI. Working Group Immunophenotyping:-

Lead Person: Dr. Asad Hayat
Cell: 0301-8469399
Email: asadhayat@skm.org.pk
- **Members:**
  - Dr. Imran Nazeer
  - Dr. Sajjad
  - Dr. Natasha Alvi
  - Dr. Ayesha Imran

XII. Working Group appropriate and sensible use of resources and investigation:-

Lead Person: Prof. Dr. Mona Aziz
Cell: 0333-4271736
Email: monaakhlaq@hotmail.com
Members:
- Dr. Anum Wasim
- Dr. Amreen Hamid
- Dr. Asma Sadia
- Dr. Sadia (LNH)
- Dr. Sarwar

XIII. Working Group Lab Accreditation standards:-

Lead Person: Dr. Tariq Mehmood
Cell: 0321-4642978
Email: tariqm@skm.org.pk
- **Members:**
  - Prof. Dr. Ayesha Juanid
  - Col. Ghulam Rasul
  - Dr. Rabia Ahmed
  - Dr. Fouzia Tabassum

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PSH National Advisory and Steering Committee

2nd PSH National Symposium

2nd PSH National Haematology Symposium was held in Faisalabad on 25th November, 2017 at Independent University Hospital, Faisalabad. This was the first event hosted by Old city of Asia; Faisalabad, previously known as Lyallpure in beautiful weather. It was well patronized by renowned Haematologist from all over Punjab, Pakistan.

This event was made successful by galaxy of Haematologists. The ceremony was hosted by Dr. Muhammad Usman (Associate Professor, Independent University Hospital, Faisalabad). Program started by recitation of Holy Quran followed by Naat-e-Rasul-e-Maqbool (PBUH).

Welcome address was given by trustee and Medical Director IUH, Prof. Dr. Shuja Tahir. Prof. Dr. Nisar Ahmed (President PSH) gave insight about current affairs of Haematology.

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1st Lecture was delivered by Brig. Ch. Altaf Hussain (Consultant Haematologist, AFIP, Rawalpindi) on **vWD: Diagnosis and Management**. Prof. Dr. Rubina Sohail (Professor of Gynae, SIMS, Lahore) gave lecture on **Management of Menorrhagia: Gynecological perspective**, Dr. Asma Saadia (Associate Professor of Haematology, Shalamar Hospital, Lahore) gave **Management of ITP.** Very informative lecture on **Complication and Management of Haemophilia** delivered by Prof. Dr. Ayesha Ehsan (Consultant FMH, Lahore).

After short break for Prayer the session resumed with talk on **Management of Menorrhagia: Haematological Perspective** by Dr. Javaria Fatima (Consultant Haematologist, CH&ICH, Lahore).

Dr. Irem Iqbal (AP, Haematology, LGH, Lahore) discussed **Rare Bleeding Disorders: Updates**. In the last Dr. Saima Farhan (AP Haematology, CH&ICH, Lahore) discussed **Platelet Function Disorders: Diagnosis and Management**.

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The shield ceremony was hosted by Prof. Dr. Asghar Butt (Professor of Paediatrics, Dean, The Children's Hospital, Faisalabad).

Over all the session was very interactive. The immediate answer by the speakers kept the session alive. The day ended with vote of thanks by Dr. Muhammad Usman. We hope that symposiums like these will be held all over Pakistan for uplifting of haematology.








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PSH ACTIVITIES

PSH Monthly Meeting Lahore Chapter on 14th November 2017 at FMH

PSH Monthly Meeting was held at FMH College auditorium on 14th November 2017. Three interesting cases were discussed, one each by Dr Sadia Taj from FMH, Dr Hareem from Chughtai Laboratories and Dr Asma from AIMC. The participants learn the cases and learnt from the discussion. Prof Ayesha Ehsan thanked all the participants for their input.

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PSH MONTHLY MEETING (LAHORE CHAPTER) ON 3RD OCTOBER, 2017 AT KEMU, LAHORE

Coordinator Dr. Ambreen Hamid

The monthly meeting of PSH, Lahore chapter for the month of October was hosted by the prestigious institute of King Edward Medical University, Lahore on 3rd of October 2017.

Many renowned Professors and Consultants along with Hematology Residents were present at the occassion. Prof. Dr. Samina Naeem, Prof. Dr. Mona Aziz, Prof. Shahida Mohsin, Dr. Humera Rafiq, Dr. Ayesha Imran, Dr. Shabnam Bashir and Col. Naeem were few of the eminent hematologists who attended the meeting. The guests were welcomed by Dr. Ambreen Hamid, Associate Professor, Pathology, KEMU.

Two cases of immense importance were presented by residents of hematology in pathology department of KEMU. Dr. Nabila Aslam, a 3rd year resident eloquently discussed a case scenario of HYPOPLASTIC ACUTE MYELOID LEUKEMIA. In a detailed manner she provided an insight and understanding of differential diagnosis of hypoplastic bone marrow .The second case, presented by Dr Fatima Zahra, was that of Precursor T-cell lymphoblastic lymphoma. She emphasized the importance of vigilant follow up in case of reactive marrow. A third case was discussed by a resident from Shaikh Zayed Hopsital Lahore. Her topic was role of Plasmapheresis in Congenital Hypertriglyceridemia.

All the three presentations were highly appreciated by all consultants and residents. Their keen interest was further seen in the question-answer session held at the end of the discussion. The questions asked were answered in an elaborated and informative manner by the speakers as well as by the Dr. Ambreen Hamid.
The session was closed by vote of thanks by Dr. Ambareen Hamid.
At the end, the guests were served with lavish tea.

2nd PSH Executive Members Meeting
on Saturday, 11th November, 2017
Tai-Pan Restaurant, Pearl Continental Hotel, Lahore

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MONTHLY PSH MEETING (KPK CHAPTER) AT KHYBER MEDICAL UNIVERSITY PESHAWAR.



Coordinator Dr. Shah Taj Masood.

The monthly PSH conference was held on Thursday,2nd NOV, 2017 at Khyber Medical University Peshawar. It was attended by the hematologists of Peshawar. Both senior members and post graduate trainees were enthusiastic as it gives them a platform to put forward their queries which are mutually discussed and a diagnosis is reached based on the international guidelines. The meeting began with the recitation of Holy Quran. After that dean KMU, D r. Arshad Javed welcomed the participants and showed appreciation regarding the fact that hematologists of Peshawar sit together and improve their skills as they know that proper diagnosis aided by appropriate investigations lead to targeted treatment of patients. He encouraged such activities in other diagnostic fields as well. Dr. Shah Taj Masood, Associate Professor of Hematology HMC began the discussion by presenting safe vein to vein transfusion and emphasized on many important points which should be implemented to ensure the Safest Blood Transfusion. After that post graduate trainee Dr. Gule Rehan from RMI ,discussed how to report and label a case of thalassemia considering the fact that hematologists are labeling a patient for his/her whole life, so we have to be very careful in interpreting a case of Hb electrophoresis. Dr. Muhammad Yasir Assit. Prof. Hematology KMU presented a case of CNS involvement in ALL along with its treatment and its side effects. Dr. Sundas Tariq (Post Graduate Trainee, HMC) put forward a case which was reviewed by three medical institute but discussed in this meeting before issuing the final report to the patient. It was a patient 40 years old male patient from

Afghanistan, presenting with fever diarrhea and pallor for one week. On examination he had pallor and splenomegaly. The peripheral smear showed predominant lymphocytes accounting 85% which adequate cytoplasm. It was reviewed as follows.

1st Medical Institute

DIAGNOSIS: Lymphoproliferative disorder, morphologically prolymphocytic leukemia.

2nd Medical Institute

DIAGNOSIS: Extensive bone marrow involvement by B-cell NON HODGKIN lymphoma.

NOTE: Morphology on peripheral smear reveals majority of calls with small size, mature chromatin and fine hairy projections on tumor cell surface. Overall feature are consistent with Hairy cell leukemia.

3rd Medical Institute

DIAGNOSIS: Hairy cell leukemia (based on the fried egg appearance of cells on trephine biopsy).

All senior members and post graduate trainee reviewed the slides again and reached a final conclusion that immunohistochemistry should be advised and if hairy cell leukemia is suspected CD markers of the leukemia should also be advised. In the end all members of meeting appreciated the group effort and team work for diagnosis and encouraged to present such cases in future for better learning and exposure. Group photo of all PSH participants in the end made another memory in academic sessions.

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CASE REPORT

Crispr-Cas 9: A Revolution in Medical Genetics

Javeria Aijaz[i] , Nisar Ahmed[ii]

https://www.linkedin.com/pulse/crispr -discovery -century -power -money -nobel -dreams -macarena -fritz/

In 2007, Barrangou and Horvath, scientists at Danisco USA, Inc., showed that after a viral challenge, certain bacteria integrated new spacers (DNA sequences) derived from the virus, and that with associated Cas genes, these spacers conferred resistance against the virus. The mechanism subsequently identified was relatively simple, and yet its application revolutionized research in molecular genetics, and is predicted to radically transform medical practice.

Briefly, Cas9 is an endonuclease which has the ability to cut double stranded DNA. This enzyme is already present in the genome of bacteria. Upon secondary viral infection, the bacterial spacer sequences (originally derived from the virus after the first infection) are transcribed to RNA, while the Cas9 enzyme is translated into its protein form. This is followed by formation of a complex between the two molecules. The RNA spacer sequences now act as a guide for the Cas9 enzyme, directing it towards the viral DNA sequences complementary to itself, resulting in a DNA-RNA complex. This DNA-RNA complex activates Cas9, which now acts as a 'molecular scissors' leading to DNA double stranded breaks. With prior knowledge of a gene sequence, complementary guide RNAs (gRNAs) can now be artificially synthesized for virtually any area of genome. Cells transduced with Cas9 enzyme together with the desired gRNAs can lead to the 'cutting' of any DNA site and a subsequent loss of function of the associated gene.

The simplicity, efficiency, and practical feasibility of this technique meant a phenomenal explosion, across the globe, of experiments designed to utilize it. Interestingly, the process can be combined with the introduction of a desired DNA sequence which can be integrated into the genome, replacing the sequence at the excised site, through a mechanism called HDR (homology directed repair).

One can immediately see the revolutionary potential of this discovery in relation to the 'correction' of mutations that cause inherited disorders. In practice, however, one of the major challenges to be overcome is the lack of a feasible and efficient method of delivery of these molecules to living humans. Though viral vectors are promising,

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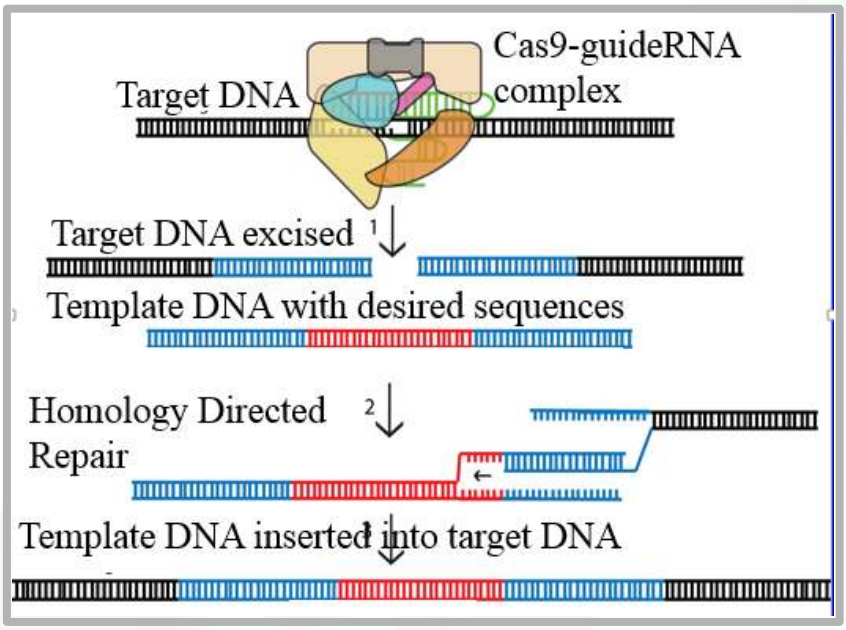
overcoming immune responses to viral vectors remains a major challenge. Hematological disorders, however, present a unique advantage in this regard, as isolation of CD34+ve stem cells, the genome of which can be edited in vitro, is possible. Several researchers have already utilized this for pre-clinical studies to the potential treatment of hemoglobinopathies, specifically sickle cell anemia and thalassemia. The corrected stem cells can be re-transfused into patients to potentially cure these disorders.



http://sites.tufts.edu/crispr/genome-editing/homology-directed-repair/

While science fiction always dreamed of creating 'designer babies', with Crispr-Cas9 this is now closer to reality by leaps and bounds. The ethical challenges of this approach, however, effected an agreement by the scientific community to put a moratorium on any research using Crispr-Cas9 on human embryos. This initial enthusiasm, however, waned slightly as 'off-target', potentially adverse, effects of the technology have been discovered. This happens because gRNAs can sometimes also pair up with 'off-target', slightly mismatched DNA sequences. Latest advances in the technique are directed towards identifying mechanisms to reduce these off-target effects, but there is little doubt that the approach will remain revolutionary for the future of medical science.

i PhD Candidate – Human and Molecular Genetics; Virginia Commonwealth University, USA; aijazj@vcu.edu
ii Professor of Hematology and Transfusion Medicine, CH & ICH, Lahore; dr_nisarahmed@hotmail.com

CASE REPORT

LYMPHATIC FILARIASIS IN A YOUNG WOMAN WITH FEVER AND LYMPHADENOPATHY

Dr. Javaria Fatima, Dr. Shazia Yaseen, Prof. Dr. Nisar Ahmad, Department of Haematology, BMT and , Transfusion Medicine, The Children's Hospital and Institute of Child Health, Lahore

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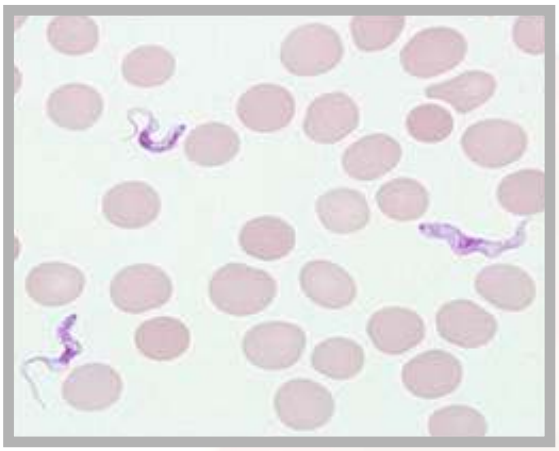
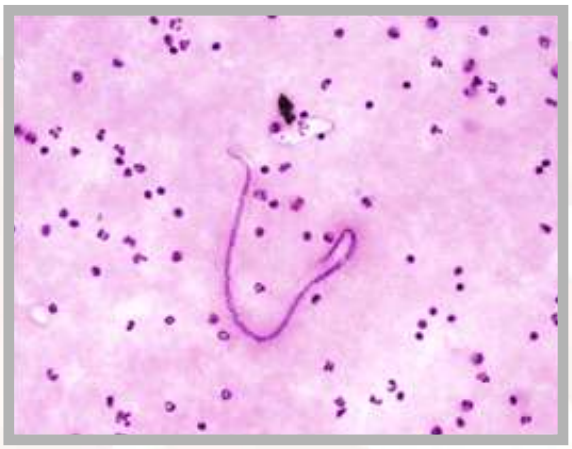
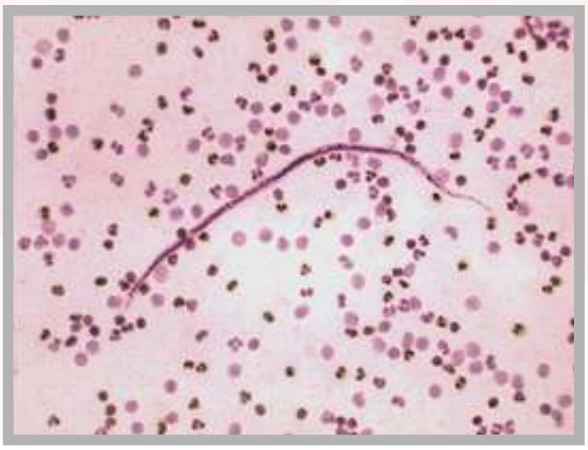
ABSTRACT:
Lymphatic filariasis is one of the types of human filariasis that occurs in blood that is associated with detectable organisms in the peripheral blood. This is a disease of all ages (6 months- 30yrs) with higher incidence in men. It is transmitted by the bite of infected mosquito responsible for considerable sufferings. Here we report a patient with lymphatic filariasis, who had typical clinical and laboratory findings and discuss further the usual presentation and course of this important entity.
Key words: lymphatic filariasis, peripheral blood.

INTRODUCTION:
Lymphatic filariasis is characterized by recurrent bouts of fever with heat, redness and pain over lymphatic vessels. Signs and symptoms are due to lymphangitis. Presenting features of lymphatic filariasis occur 6 months or more after infective bite. Repeated episodes lead to chronic picture including hydrocele, lymphedema, elephantiasis and chyluria. It is prevelant worldwide in the tropics and subtropical regions. Infection with three species if filarial worms cause lymphatic filariasis: Wuchereria Bancrofti, Brugia Malayi and Brugia Timori. More than 90% of infections are due to Wuchereria Bancrofti found in Asia. The diagnosis requires demonstration of microfilarae in







the peripheral blood and antigen detection assay which can be done by card test and through ELISA. The other diagnostic methods include PCR, Ultrasonography, Lymphoscintigraphy and X rays.

CASE REPORT:

Patient named ABC wife of DEF 35 years old, resident of Lahore had reffered to Hematology, transfusion medicine and Bone marrow transplant department of the Children Hospital and Institute of child health Lahore on 5th of September 2017. She had fever which was recurrent on and off for the past six months. She also had history of allergies and then developed lymphadenopathy for the past 2 months. The family history was not significant. On examination, she was pale with bilateral cervical and inguinal lymphadenopathy. CBC counts showed Hb 11.3, WBC 6.5 and platelet count 324 with differential of neutrophils 61%, lymphocytes 30%, eosinophils 07%, monocytes 02%. MCV was 84.1, MCH 23.6 and MCHC 28.1. ESR was 58mm after the first hour. Peripheral smear examination revealed normocytic normochromic RBCs, WBCs were unremarkable, platelets were normal in count and morphology. Identification of sheathed microfilarae was done in thick and thin blood smears. Antigen detection for confirmation was done by ELISA. Patient history, peripheral smear findings and antigen detection by ELISA was suggestive of lymphatic filariasis.

DISCUSSION:

Lymphatic filariasis is a community acquired disease and an important health problem caused by mosquito borne lymphatic dwelling nematodes, Wuchereria Bancrofti and Brugia Malayi. This is a common tropical parasitic disease and 120 million people are affected in the world of which two third are in Asia. This disease causes high morbidity and mortality among humans. Irreversible elephantiasis is the major clinical manifestation and detection of microfilarae in the peripheral blood is very important.

Little is known regarding risk factors for lymphatic filariasis. Age, sex and occupation dependent exposure to mosquitoes were important risk factors for infection with W.Bancrofti. It is likely that men often acquire infection in high transmission areas while women and children can also be infected in low transmission areas due to low immunity.

Microscopic inspection of peripheral blood is the standard method of diagnosis of lymphatic filariasis. Several other methods such as DNA detection using PCR, antigen detection and antibody serology using ELISA can be used as diagnostic alternatives.However, the cost, accuracy or the complexity makes these methods unsuitable for mass testing.

WHO considers Lymphatic Filariasis to be a global health problem affecting over 120million people in 73 countries in 2012.At present, over 1.4 billion people are at risk for being infected. There is a need to design a policy that strengthen the diagnosis and treatment component of filariasis control strategies.

There is need for new diagnostic tools for filariasis elimination programmes. Antibody detection and molecular xenomonitoring could easily be used for identifying areas that are endemic for B.Filariasis. however, these tools have not been widely used for this purpose to date.

The first global program to eliminate Lymphatic filariasis was created in 1997 by WHO. It achieved filariasis elimination by mass drug administration 10 years. Now this program is continuously providing necessary drugs to the targeted at risk population.

Many programs in different countries were created based on WHO strategy for global elimination of the worldwide health problem. One of the first programs to be established was The Egyptian Ministry of Health National Program. This program used mass drug administration in all known endemic areas with yearly cycles of single dose diethylcarbamazine and albendazole.

Chemotherapy is the principle intervention in the control of filariasis. Current strategies involve the community based delivery of single, oral doses of combination of diethylcarbamazine, ivermectin or albendazole which need to be repeated on an annual basis for several years to interrupt transmission of disease.

A six week course of doxycycline, either alone or in combination with diethylcarbamazine-albendazole leads to decrease in microfilaremia and reduces adverse reactions to antifilarial treatment in B.malayi infected persons.

Hence, regarding treatment of community disease such as filariasis, the case detection and treatment in low endemic areas are suitable for preventing transmission and controlling the disease.

References

S.P.Chavarkar. Lymphatic Filariasis: The importance of screening all peripheral blood smears in low power for detection of asymptomatic cases. Int J Res Med Sci. 2017 Jan ,5(1):350-353.

C.B Chesnais, F. Missamou, S.D Pion et al. A case study of risk factors for Lymphatic Filariasis in the republic of Congo. Parasites and Vectors 2014,7:300-311.

S. mallawaarachi, GVA premlal, SS wimalaana et al. Detection of microfilarae in peripheral blood smear using image analysis. Srilankan J Pathol 2013:978-1002.

D. Musso. Relevance of the eosinophil blood count in Bancroftian Filariasis as a screening tool for the treatment. Pathogens and Global Health 2013, 107(2):96-105.

G.J. Weil. Diagnostic tools for filariasis elimination programmes. WHO publications 2005, 11(4):396-407.

E.A Ottesen, P.J Hooper, M Bradley et al. The Global Program to eliminate lymphatic filariasis: Health impact after 8 years. Plos Journal 2008, 10(2):317-329.

R.M Ramzy, M. E Satouhy, H.Helmy et al. Effect of yearly mass drug administration with diethylcarbamazine and albendazole on Bancroftian Filariasis in Egypt: A comprehensive assessment. Lancet 2006, 367:992-999.

M.J Taylor, A Hoerauf. A new approach to the treatment of filariasis. Current opinion in infectious diseases 2001, 14: 727-731.

S. Mand, K.Pfarr, PK Sahoo et al. Microfilaricidal activity and amelioration of lymphatic pathology in Bancroftian filariasis after 3 weeks of Doxycycline followed by single dose Diethylcarbamazine. Am. J. Trop. Med 2009,81(4): 702-711.

T.Supali, Y. Djuardi, K.M Pfarr et al. Doxycycline treatment of B.malayi infected persons reduces microfilaremia and adverse reactions after diethylcarbamazine and albendazole treatment. Clinical infectious diseases 2008, 46: 1385-1393.

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AN EXPERIENCE WITH HEMOPHILIA ACADEMY

Dr. Saima Farhan,
Secretary PSH.

The Haemophilia academy is a faculty driven, Haemophilia focused initiative that seeks to help fulfill the educational, needs of young hematologists intending to develop a career in hemophilia and bleeding disorder.

For the first time this year I had an opportunity to represent Pakistan in the 10th Hemophilia Academy Course in Edinburgh, UK from 29th October, 2017 to 3rd November, 2017.

This course is led by a distinguished faculty of Seven Expert in the field of Haemaophilia and bleeding disorder headed by;

- Dr. Christopher Ludlam, Chairperson Haemophilia Academy, UK.
- Dr. Victor Blanchette Toronto, Canada.
- Dr. Roseline d' Oiron, Paris, France.
- Dr. Keith Hoots, Washington, USA.
- Prof. Dr. David Lillicrap, Kingston Canada.
- Prof. Dr. Claude Negrier Lyon, France
- Prof. Dr. Johnnes Oldenburg, Bonn, Germany

The course was very well organized, touching each and every aspect of hemophilia care. The lesson I learnt was that we should combine hands and start working as team seeking expertise of our colleagues in other specialty like orthopedics, Rehabilitation Medicine e.t.c. so that we may be able to make a comprehensive Hemophilia Care Center and that is the only way we can deliver the best for the patient care.

I recommend this course for my junior colleagues for opening up new avenues for their future and development of their professional carriers.

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UPCOMING EVENTS

NATIONAL

20th PSH Annual Meeting Haemcon 2018
Pearl Continental Hotel, Rawalpindi
March 1-4, 2018
For Contract: Gen. Tariq Mehmood Satti
Commandant AFBMTC/ NIBMT, Rawalpindi
Cell No: +92-336-4243525
Email: tariqmahmood_satti@yahoo.com

INTERNATIONAL

18th T-CELL LYMPHOMA FORUM
1st-3rd February 2018 –
Hilton La Jola Torry Pines La Joal, CA, USA

World Congress of Phlebology
4-8 February 2018 – Melbourne, Australia
www.uip2018.com

PSH SCHOLARSHIP FOR TRAINING IN HEMATOLOGY

PSH supports a 3 months to six-month training program entitled as PSH Intensive Training Abroad in Hematology,funded by the PSH itself. The Program is intended Early Stage Post- docs, and Junior Faculty. Upper age limit is 45 years. The Program features capacity building in different areas of hematology, individually-prescribed development plan (IDP), learning of cutting-edge methodologies in application to clinical problems in field on interest, facilitating high impact publications, and be part of reference nucleus in country for the area of interest.

The areas of hematology promoted for training by PSH includes hemoglobinopathies , enzymopathies and membranopathies, transfusion medicine, hemostasis and thrombosis, Haem-Oncology, bone marrow transplantation, molecular hematology, morphology , immunohistochemistry and flowcytometry or any other field.The individual on return will be required to submit a report to PSH and deliver a series of lectures to hematologist at major cities of Pakistan.

The selection process will involve scrutiny of application, call for an interview and final intimation of selection by PSH staff. All information will be available on PSH website along with application forms. The relevant dates will also be displayed on website. The technical committee after selection will refer the matter to Administrative staff of PSH for release of funds and methodology of same. Senior PSH members will be approached by PSH secretary to facilitate the training attachement at prestigious institutes. The individuals themselves should also try themselves to get placements.

APPLICATION FORM

INTENSIVE TRAINING IN HEMATOLOGY SCHOLARSHIP

Pakistan Society of Hematology

Name of Supervisor: _____

Date: _____ **Proposed starting date of training:** _____

Name of Module _____

Name of Institute: _____

Name: _____

National Identification Number: _____-_____-_____

Date & Place of Birth: _____

Citizenship or Visa status: _____

Home address: _____

Phone: (Mobile)(__) _____ **(Office)(__)** _____

Email address: _____

EDUCATION

College	Degree	Month / Day / Year
Undergraduate		/ /
Graduate school		/ /
Medical school		/ /

Honors, Special Training, etc: _____

Professional Positions	Institutions	Year

For application to the PSH Scholarship for Intensive Training abroad in Hematology please submit the following:

1. Completed application form
2. Current curriculum vitae
3. Statement of Research Experience/Current Research Interest: 1-2 pages single-spaced
4. Statement of Training Requirement in Advanced Hematology/Training Goals: 1 page single- paced
5. Two Letters of Recommendation

INSTRUCTIONS: Please send the above information by email with the subject "PSH Scholarship Program Application 2017-18: Your Name" to:

Lead Person: **Brig. Nuzhat Salamat**
E-Mail nuzhatsalamat@yahoo.com

Program Coordinator: **Dr. Saima Farhan**
E-Mail dr_saima99@yahoo.com

All documents must be created into a single document that includes: Part 1: Application; Part 2: Curriculum Vitae; Part 3: Short Essays; Part 4: Letters of Recommendation. Please save your application document as First Name Last Name PSH Scholarship 2017 till 31st January, 2018.

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OBITUARY:

Prof. Dr. Tahira Tasneem, an eminent haematologist and much respected member of our PSH family passed away on 14th October, 2017.

Dr. Tahira was Professor of Hematology, at Akhtar Saeed Medical and Dental College, former she worked as professor of Haematology at Services Hospital, Lahore. She had done her post-graduation in haematology. She was the senior member of Pakistan Society of Haematology and Pakistan Association of Pathology. She was a highly qualified hematologist who had a vast experience of working in the leading institutions. She had presentations in a lot of national and international conferences.

Please recite Surah-e-Fatiha for the departed soul. We pray that may Allah bless her in the hereafter and grant patience to his family.

Ameen.

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Views & News

The Pakistan Society of Haematology updates is published on a quarterly basis and is a quick guide to all the happenings in the haematology community. To improve the updates, your comments and suggestions are welcome. We further encourage you to send us write ups and photographs of any PSH event in your city/province and they would be featured in our upcoming updates.

For contact, please refer to our corresponding address. We hope to hear from you on regular basis.

This updates was designed and edited by:

Dr. Saima Mansoor Bugvi

CORRESPONDENCE

Dr. Saima Farhan, Secretary PSH

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