

Medi-Update

ISSUE : 2 | JANUARY 2017



HORIZON - from a healthy today to
a healthier tomorrow



PARUL SEVASHRAM HOSPITAL

PARUL INSTITUTE OF MEDICAL SCIENCES & RESEARCH

"Give a child love, laughter and peace, not AIDS."

--Nelson Mandela

From The Desk of Leaders

“ Dear All,

I feel glad to share with all, the second issue of our newsletter themed on AIDS. World AIDS Day, designated on 1 December every year since 1988, is dedicated to raising awareness of the AIDS pandemic caused by the spread of HIV infection, and mourning those who have died of the disease. Parul University took this initiative of contributing to the noble cause of spreading awareness about HIV into community through various innovative activities. All the Medical & Paramedical students of Parul University have always been motivated and encouraged to take part in such type of outreach activities to make them realize their responsibility towards society. I congratulate all the staff and students who were a part of this event and I wish all the best to all for more such endeavors. ”



Dr. Geetika Madan Patel
Medical Director - Parul University



Dr. V. P. Hathila
Dean - PIMSR

“ We are pleased to introduce the current issue of our medical newsletter as dedicated to creating awareness about HIV/AIDS. While India's accomplishments in preventing and controlling AIDS has been noteworthy, rapid changes in the socio-economic environment of the country has provided unique new challenges. Additionally, accessibility issues to health care further impairs our ability to bring the issue under control. Clearly, treatment of HIV/AIDS has turned into a mode of prevention as it dramatically prevents morbidity and mortality, HIV transmission, and tuberculosis. We hope this issue of our newsletter succeeds in increasing awareness of recent challenges as well as highlighting the steps PIMSR has taken to increase awareness. ”

“ As the name Acquired Immunodeficiency Syndrome suggests, HIV virus is acquired by humans and weakens immune system by depleting CD4 cells . Early diagnosis and anti retroviral therapy are available that increases life expectancy but does not provide cure. Additionally, adverse effects of drugs are high and 100% adherence is necessary. Prevention of HIV transmission is crucial for which a combination of public and personal health strategies is necessary. Additionally, acceptance of people living with HIV/AIDS will help us in HIV control and to educate other people. Integrating Counselling and Testing Center (ICTC) at PSH is sanctioned by NACO. The ICTC is expected to be functional after 20th February 2017 and will further aid PSH's efforts in controlling AIDS in the community. ”



Dr. Indira Parmar
Medical Superintendent - PSH

“AIDS can destroy a family if you let it, but luckily for my sister and me, Mom taught us to keep going. Don't give up, be proud of who you are, and never feel sorry for yourself.” --Ryan White

HIV/AIDS: THE INDIAN SCENARIO

Despite over 3 decades of progress on Human Immunodeficiency Virus (HIV), it remains an important public health challenge, with significant social and economic implications. During this time it has shifted from a fatal disease to a chronic manageable disease. Incidence of the most severe form of HIV – AIDS has declined. However significant challenges remain which vary from region to region. Here we describe the scenario of HIV/AIDS in India.

PREVALENCE IN INDIA

Though the prevalence rate of HIV/AIDS in India at 0.26% is lower than many other countries, due to India's high population this translates to 2.1 million people living with HIV (third highest in the world). There has been a 32% decline in new infections and over 50% decline in HIV related deaths over the past decade.

FACTORS AFFECTING PREVALENCE RATES

Most new infections are accounted for by heterosexual sex. Key affected populations include sex workers, drug users, men who have sex with men and transgender people. Among these, prevalence rates in sex workers and men who have sex with men have decreased while trends for drug users and transgender populations have increased. There has been evidence of an emerging HIV epidemic among men who have sex with men in urban areas that was not previously recognized as having high HIV rates. This can be attributed partly to the associated stigma and the recent criminalization of same sex sexual conduct. This leads to less “at risk” populations seeking access to prevention and health care. The increasing prevalence among transgender community can be attributed to high-risk behaviors such as alcohol and substance abuse, and low literacy rates. Since the Supreme Court Order recognized transgender community as a distinct gender, access to HIV services has relatively increased. Drug users have also been identified as a high-risk group and their number is increasing. HIV prevention activities for drug users include needle and syringe exchanges and opioid substitution therapy (OST). In addition to these populations, migration has been linked to increases in HIV transmission. There are an estimated 7.2 million migrant workers in India, of whom 0.99% are

“I enjoy being the messenger for God in terms of letting people know about HIV and AIDS.”

--Magic Johnson

Medi-Update | 02

ISSUE : 2 | JANUARY 2017

HIV/AIDS: THE INDIAN SCENARIO

living with HIV - much higher than the national prevalence of 0.26%. Migrants are a 'bridge population', as they form a link between urban and rural areas, and between groups that are at high and low-risk of HIV transmission.

TESTING AND COUNSELLING FOR HIV

The past 20 years has seen a dramatic increase in HIV testing and counseling centers in India with just 67 in 1997 to more than 20,000 in 2016. Over 12 million users access these centers per year meeting the annual target. Despite this progress, around one quarter of people living with HIV in India (25.6%) are unaware of their status.

HIV PREVENTION IN INDIA

The National AIDS Control Organization (NACO) formulates policies and programmes for control and prevention of HIV in India. The current programme, NACP-IV (2012-2017), aims to reduce annual new HIV infections by 50% through the provision of comprehensive HIV treatment, education, care and support for the general population as well as build on targeted interventions for key affected and high risk groups.

Some key Projects include:

- Targeted interventions for key affected groups
- Project Sunrise
- Project NIRANTAR
- Migrant Interventions at Source and Transit
- HIV education and awareness
- Link Worker Scheme
- The Condom Social Marketing Programme (CSMP)
- Preventing mother-to-child transmission (PMTCT)

"It is bad enough that people are dying of AIDS, but no one should die of ignorance."

--Elizabeth Taylor

HIV/AIDS: THE INDIAN SCENARIO

ANTIRETROVIRAL TREATMENT (ART) IN INDIA

Antiretroviral treatment (ART) has been made available free of cost since 2004. To monitor response to therapy patients must take a CD4 count every 6 months. The percentage of adults eligible for ART receiving treatment has risen from 34% in 2013 to 44% in 2015. In spite of this increase total number of eligible patients on ART is low. This could be due to difficulty in access to clinics. NACP-IV aims to make second-line ART free, although a shortage of both first-line and second-line ART has become more commonplace in recent years.

HIV STIGMA AND DISCRIMINATION IN INDIA

Stigma and discrimination related to HIV has been made a prime focus of the NACP-IV. A Bill was passed in 2014 prohibiting discrimination in employment, education, travel, healthcare and insurance. However people with HIV and AIDS continue experiencing discrimination in workplace, community, households and even the healthcare system.

FUNDING FOR HIV IN INDIA

The NACP-IV dedicates 80% for HIV domestically which is in sharp contrast to the near complete funding by international sources prior to 2012. Most of the NACP-IV budget is allocated to prevention of HIV while 31% is allocated to treatment. However in recent years domestic funding has declined by nearly 22%.

FUTURE OF HIV IN INDIA

The National Aids Control Programme has allowed India to make significant progress in the control of the HIV epidemic especially among high-risk groups. Yet much is still to be achieved in terms of access to healthcare facilities, effective implementation of prevention programmes, availability of drugs as well as removing stigma and discrimination associated with HIV.

"HIV does not make people dangerous to know, so you can shake their hands and give them a hug: Heaven knows they need it." --Princess Diana

What's New at PIMSR

CME: OVERVIEW OF GUIDELINES FOR CONTROL OF TUBERCULOSIS

Continuing Medical Education (CME) programme on " Overview of Guidelines for Control of Tuberculosis " was organized under RNTCP and sponsored by District Health Society at Parul Institute of Medical Science and Research, Parul University on 21st October 2016. The District TB Officer Dr. Menakshi Chauhan delivered a talk explaining "New Guidelines for TB". For further information visit the website <http://www.tbcindia.org/>.



FIRST REVISED BASIC COURSE WORKSHOP OF MEDICAL EDUCATION TECHNOLOGY

Purpose of Medical Education Technology is to bring a remarkable change in the methodology of Medical Education & make it more skill based as well to incorporate problem based learning concept.

First Revised Basic Course Workshop of Medical Education Technology was conducted by Our Medical Education Unit at PIMSR, Parul University from 16th to 18th November 2016. Over 3 days excellent lectures covering a broad range of topics were delivered by our faculty -Dr. Jaba Rajguru (Coordinator, MEU, PIMSR), Dr. Chetan Kumar, Dr. Soeb Jankhwala, Dr. Nisarg Savjiani, and Dr. Ketan Mangukiya. Dr. Aparajita Shukla, Associate Professor, Dept. of Community Medicine, Smt. NHL Municipal Medical College was the observer for this workshop.



"It's not the years in your life that count, it's the life in your years."

--Abraham Lincoln

What's New at PIMSR

OBSERVATION OF WORLD AIDS DAY

The Department of Community Medicine, PIMSR organized a series of events to observe World AIDS Day on December 1 2016 for showing solidarity for People Living with HIV/AIDS and for awareness generation in the community. The theme for the day was “Hands up for HIV Prevention”. The following activities were carried out:

1. **Skit competition** among the 1st MBBS students of Parul Institute of Medical Sciences and Research: A skit competition was announced among the 1st MBBS students of the Medical College on various themes and sub-themes. All the themes were related to HIV/AIDS including high risk behavior of the bridge population, social discrimination, gender discrimination, IVDU, solidarity and support and social acceptance of the PLWHAs etc. In the event, People living with HIV/AIDS (PLWHAs) were also invited and felicitated. They were also requested to share their experiences.
2. **Poster competition** among the 1st MBBS students of Parul Institute of Medical Sciences and Research :Students were encouraged to display their art and they came up with exceptional ideas for depicting the emotions and support for HIV/AIDS
3. **Street plays** were organized at Urban and Rural Health training centers under the PIMSR: Street plays were performed by the students of 1st MBBS at the field practice areas of RHTC and UHTC under the Medical College. The street plays were on the same themes as the skit competition but in local language and performed in front of the local community at the centers
4. **CME on HIV/AIDS** at Parul University involving Medical and Nursing disciplines
5. **A rally on HIV/AIDS** awareness in the urban areas of Vadodara city: A rally was organized for raising awareness of HIV/AIDS at Kishanwadi. The theme for the rally was “Hands Up for HIV Prevention”. The rally was inaugurated by Dr Ashishkumar C Gamit Medical Officer Health Department, VMSS, Vadodara.



What's New at PIMSR



CME: "THYROID DISORDERS"

Continuing Medical Education (CME) programme on " Thyroid Disorders" was organized by the Department of Medicine, Parul Institute of Medical Science and Research, Parul University on January 4 2017. Dr. Mona Shah , Endocrinologist was the chief guest who delivered the lecture "Refractory hypothyroidism , thyroiditis and Difficult Case Management".

EMPLOYEE'S STATE INSURANCE CORPORATION (ESIC) OPD (DISPENSARY)

An ESIC OPD(Dispensary) has been commenced at P.S.H. which will be serving ESIC employees of all the neighboring areas.

HEALTHY HEALTHFORCE PROJECT

A novel initiative of healthy health force project has been taken by PIMSR & PSH in collaboration with district health



INITIATIVE - PARUL UNIVERSITY, VADODARA

A Novel initiative of Health Health force Project has been taken up by Parul Medical College & Hospital in Collaboration with District Health Office, Vadodara for the first time. This Project aims to secure the Health of Health Service Providers, ASHAs, Female Health Workers, Anganwadi workers and other Health functionaries. A thorough & complete Health Check-up Programme has been organized by Parul Sevashram Hospital in collaboration with District Health Office Team which includes General Medical Examination, Laboratory Investigation like Blood Sugar, Hemoglobin, Pap Smear Cytology for Cervical Cancer Screening, Breast Examination and many more other Investigation for ensuring a complete Health Evaluation of all the functionaries. The inauguration of this project was carried out in Parul University Campus & was graced by the presence of District Development Officer, Dr Saurabh Pardhi, Additional District Health Officer, Dr Uday Tilawat, all other officers of District Health Office, President, Medical Director, Dean and Medical Superintendent of Parul University & Medical College. The programme will continue for about 3 months and more than 1000 health functionaries will be benefitted through the service of this initiative. Sd/- Dr Gaurika Modani, Medical Director, Parul University

The Indian EXPRESS Mon, 30 Jan
epaper.editions epaper.ind

office, Vadodara for the first time. The project aims to secure the health of health service providers, ASHAs, Female Health workers, Anganwadi workers & other health functionaries. A through & complete health check-up program has been organized by PSH which includes general medical

examination, laboratory investigation like blood sugar, hemoglobin, Pap smear, cytology, breast examination. The inauguration of this program was carried out at PIMSR & was graced by the presence of District Development Officer Dr. Saurabh Pardhi & Additional District Health Officer Dr. Uday Tilawat.

The program will continue for three months & more than 1000 health functionaries will be benefitted.

MULTI DIAGNOSTIC MEGA CAMPS AT Jambusar, Bharuch, Dahod, Dabhoi, Karjan by Parul Sevashram Hospital



વડોદરા | પારુલ મેડિકલ કોલેજ અને જિલ્લા આરોગ્ય વિભાગના ઉપક્રમે હેલ્થી હેલ્થ ફોર્મ પ્રોજેક્ટ શરૂ કરાયો છે. જેમાં લેબોરેટરી, બ્લડ સુગર, હિમોગ્લોબીન, સ્તન કેન્સરની તપાસ કરાશે. આ કાર્યક્રમ ૩ મહિના સુધી ચલવવામાં આવશે. જેમાં 1000 જેટલા લાભાર્થીઓને લાભ અપાશે.



Open Your Eyes Before AIDS Closes Them.

Medi-Update | 07

ISSUE : 2 | JANUARY 2017

Interesting Medical Case Reports of Patients Treated at PSH

1. Rare Complication of Pseudoaneurysm After Transradial Access

A transradial approach to vascular access is rapidly becoming preferable to traditional femoral artery access for both diagnostic coronary angiography and percutaneous coronary intervention (PCI). This trend is explained by the significant reduction in the occurrence of access-site complications observed when selecting a transradial over transfemoral technique – reported to be 0.6% and 1.5%, respectively. Complications of transradial catheterization include radial artery occlusion, nonocclusive injury, spasm, hand ischemia, nerve damage, bleeding and pseudoaneurysm formation.

A pseudoaneurysm (PSA) is described as a tear through all of the layers of the artery with persistent flow outside of the artery contained by the surrounding tissue. Clinically significant pseudoaneurysm occurs in 0.05% to 1.0% of diagnostic and up to 6% of interventional transfemoral procedures. Post-transradial catheterization pseudoaneurysm is rare, with an incidence of <0.1% reported in a large case series.

Factors predisposing to the development of radial artery pseudoaneurysm include multiple puncture attempts, ongoing systemic anticoagulation, inadequate hemostasis/postprocedure compression, vascular site infection and the use of larger catheter sheath sizes.

CASE REPORT:

A 50 year old male approached PSH casualty with complaint of bleeding from left forearm near wrist. He had swelling of approximately 12X10 cm size at the flexor aspect of the left wrist from where active bleeding was present. Immediately skin was sutured to stop bleeding. Ultrasound of local part was done which showed homogenous swelling suggestive of hematoma or aneurysm.

After all preoperative investigation, patient was taken for operation for exploration of left wrist. Pseudo aneurysm of radial artery was found. With careful dissection both proximal and distal ends of radial artery was ligated. Post operatively all finger saturation was 98-100% and no sensation

“Because of the lack of education on AIDS, discrimination, fear, panic, and lies surrounded me.”

--Ryan White

Interesting Medical Case Reports of Patients Treated at PSH

impairment was present.

DISCUSSION:

Treatment of radial artery PSA is based on the anatomic characteristics of the PSA. A small PSA may



Preoperative picture of forearm with radial pseudo-aneurysm



Excised Specimen of radial pseudo aneurysm following surgery



Postoperative picture of forearm following excision

be treated with compression to occlude flow into the PSA, while a large PSA may require surgical intervention. Other treatment strategies include the use of an external compression device or thrombin injection when the PSA has a narrow neck.

Although pseudoaneurysms of the radial artery are rare, they are significant and, in some cases, may result in serious consequences. Prevention must be focused on obtaining both optimal individualized postprocedure compression pressure and duration. A balance must be struck between preventing pseudoaneurysm and avoiding overenthusiastic compression resulting in occlusion of the artery.

**Attending Clinicians was Dr. Mithun Panchal, Assistant Professor & Plastic Surgeon, Dept. of Surgery, PIMSR*

"Nobody can do everything, but everyone can do something."

Interesting Medical Case Reports of Patients Treated at PSH

2. Rare Case of Kawasaki Disease

A 6 year old female patient from Khargone, Madhya Pradesh was admitted with chief complaints of maculopapular pruritic rash for 7 days, high grade fever for 4 days associated with bodyache, headache, conjunctival congestion and watery diarrhea 12-15 times/day since 4 days.

PAST HISTORY:

Patient was admitted in a hospital in Khargone (MP) three days before coming to PSH where CBC and MP was done. Patient received treatment in form of IV fluids, Inj.ceftriaxone, Inj.amikacin, ondansetron, paracetamol, and dicyclomine sporolac and was referred to our hospital.

GENERAL EXAMINATION:

Patient had continuous fever ranging from 101-103 persistent. Patient had dryness of skin that was more over axilla and groin, redness of eyes and subconjunctival hemorrhage, congested throat, stomatitis with strawberry tongue, and mild edema of hands. No cervical lymphadenopathy was present. Systemic examination was normal.

INVESTIGATIONS

Patient was investigated for CBC, urine, serum widal & NS-1 for dengue. All reports were normal except urine routine which showed 15-20 pus cells and albumin 1+. Patient was started on IV ceftriaxone and symptomatic treatment. Diarrhoea improved but high-grade fever persisted and peeling of skin of fingers started. So, we suspected incomplete Kawasaki's disease and patient was investigated 4 days after admission for inflammatory markers: CBC, ESR, CRP, and serum procalcitonin as well as urine and blood culture. CBC showed leukocytosis with high platelet count, CRP was 90 mg/L, and ESR was 68 mm/hour. Blood & urine cultures were negative. Serum procalcitonin was 0.88 ng/ml.

DIAGNOSIS

Diagnosis of Kawasaki's disease was confirmed by positive inflammatory markers & positive signs like conjunctival hemorrhage, strawberry tongue, pharyngeal congestion, edema of hands, maculopapular pruritic rash, and peeling of skin with high grade fever and diarrhea.

"It is the greatest of all mistakes to do nothing because you can only do little – do what you can."

--Sydney Smith

Interesting Medical Case Reports of Patients Treated at PSH

TREATMENT

IVIg was given on 9th day of fever and tablet aspirin was started in anti-inflammatory dose of 80mg/kg /day. After 24hrs of IVIg and aspirin treatment, patient became afebrile. Clinically patient was absolutely fine and discharged twelve days after admission.

On follow up at two weeks there were no complaints. All inflammatory markers had become normal, 2D echo was normal and patient was advised to repeat echo every year and continue aspirin for 6 months and follow up every month.

DISCUSSION

Kawasaki's disease is an acute, febrile, vasculitis of unknown etiology. Some children with Kawasaki's disease develop coronary artery aneurysms or ectasia, ischemic heart disease, and sudden death. It is a common cause of acquired heart disease in developed countries. In India, sporadic cases have been reported where rheumatic heart disease is the common cause of acquired heart disease. Kawasaki's Disease is a self-limiting disease where anti-inflammatory and anti-platelet agent aspirin is given in doses of 80mg/kg/day in 4 divided doses for 2 weeks and then 3-5 mg/kg/day for 6 weeks. IVIg therapy is given for prevention of coronary involvement in a dose of 2g/kg in a single infusion. Though rare in India, it is important to recognize the condition in any acute, high-grade fever cases with clinical signs of Kawasaki's Disease and positive inflammatory markers and no other bacterial infection. IVIg and aspirin should be given to prevent coronary involvement.

**Attending Clinicians were Dr. Indira Parmar, Medical Superintendent and Professor; Dr. Asruti Kacha, Assistant Professor and Dr. Prashant Ram, Senior Resident - Dept. of Paediatrics, PIMSR*

"It's easy to make a buck. It's a lot tougher to make a difference."

--Tom Brokaw

Interesting Medical Case Reports of Patients Treated at PSH

3. INTERESTING CASE PRESENTATION: PUERPERAL SEPSIS

A post-partum day 10 primi-para patient who was delivered in a Government hospital was admitted at Parul Sevashram Hospital in shock with Acute renal failure.

According to the history given by her relatives, she developed disorientation, breathlessness and fever 3 days after her delivery. She was then taken to a Government hospital with the above complaints but her condition further deteriorated and then the patient was brought to Parul Sevashram hospital for further management.

She was admitted to ICCU. On admission, her general condition was very poor. She was breathless, rowdy and running temperature of 101 degrees with raised creatinine value. Soon she became tachypnoic and with decrease in SPO2 was put on ventilator support. Urgent sonography was performed and showed retained products in uterine cavity with ascites.

On per abdominal examination, her abdomen was tense with guarding present. On local examination, the episiotomy wound was unhealthy with a very foul smelling liquor. On per vaginal examination, Os was open and uterus was bulky and tender. Decision was taken for an urgent Dilatation and Evacuation.

In the operation theatre, ballooning of posterior vaginal wall was seen. Ascitic tapping was done which showed frank pus. Decision for Colpotomy was taken.

On Colpotomy, around 1000 ml of purulent discharge gushed out from the peritoneal cavity. D & E was done and retained material was sent for histo-pathology. The Ascitic purulent material and Colpotomy pus was sent for culture and sensitivity.

Post-operatively, she was shifted to ICCU on ventilator support. After her pus culture report, she was

"Preconceived notions are the locks on the door to wisdom."

--Merry Browne

Interesting Medical Case Reports of Patients Treated at PSH

shifted on to the appropriate antibiotics and her condition started improving. After around 25 days of ICCU stay, she was shifted to ward in stable condition. In between, she also developed Deep Vein Thrombosis in her right lower limb, which was managed accordingly.

Patient was discharged in stable condition and her follow up visits were also uneventful.

DISCUSSION:

Despite significant advances in diagnosis, medical management and antimicrobial therapy, sepsis in the puerperium remains an important cause of maternal death and affects an average of 6 to 9 women in every 1000 deliveries.

Severe sepsis with acute organ dysfunction has a mortality rate of 20-40%, rising to around 60% if septicaemic shock develops. Sepsis may be defined as infection plus systemic manifestations of infection. The definition of Severe Sepsis includes organ dysfunction or tissue hypo-perfusion. Septic shock is defined as persistence of hypo-perfusion despite adequate fluid replacement therapy.

Symptoms of puerperal sepsis may be less distinctive than in the non-pregnant population and not necessarily present in all cases, therefore a high index of suspicion is necessary. It is an important morbid condition having consequences on both foetal and maternal outcomes. In the mother, some of the immediate consequences include, septicaemia, endotoxic shock or the development of peritonitis or abscess formation leading to surgery.

**Attending Clinicians were Dr. S. L. Pagi, Professor and Head & Dr. Noopur Nagar, Junior Resident Dept. of Obstetrics & Gynecology, PIMSR*

MYTHS IN MEDICINE (HIV)

- 1. Myth :** To stop the spread of HIV, people simply need to give up promiscuous sex and drug use.
Fact : Socioeconomic structures hamper people's ability to make clear free choices regarding such behaviors. Factors like economic, racial and gender inequalities, migration, and armed conflicts make avoiding the virus very difficult.
- 2. Myth :** Money for AIDS in developing countries goes into the pockets of corrupt officials.
Fact : While corruption does exist systems are being created to fight and prevent corruption. Hence, it should not slow donor contributions:

 - Individual citizens, groups, governments as well as the media have shown an increasing awareness to fighting AIDS
 - New international institutions and initiatives, have strict selection and monitoring systems to ensure accountability for funding
 - Even countries with history of corruption have implemented successful HIV/AIDS program like Brazil, Thailand and Uganda.
- 3. Myth :** The best way to control AIDS in the developing world is through prevention. Costly treatment should wait until prevention programs have been fully funded and deployed
Fact : Prevention and treatment should have equal roles in the fight against HIV/AIDS:

 - Prevention programs alone are limited in terms of efficacy especially in high prevalence countries. Often socioeconomic situations do not allow people to control their exposure to the virus.
 - Voluntary counseling and testing, a key prevention strategy, is much more successful when tied to a treatment program for those who test positive.
- 4. Myth :** An HIV vaccine will soon be available, and this will solve the AIDS crisis.
Fact : A vaccine will not solve the AIDS crisis:

 - While progress has been made in vaccine research many gaps remain to develop an effective vaccine.
 - The pace of development is slow due to lack of funding possibly due to lack of incentive in developing such a vaccine. By the time an effective vaccine is developed millions of people would have been infected and died of HIV/AIDS.
- 5. Myth :** Since resources are limited, officials should concentrate on problems that affect large segments of the population, such as nutrition, clean water, maternal & child health, and immunizations, rather than expensive and complex AIDS treatment that helps only a few.
Fact : AIDS treatment would have far-reaching benefits, since the disease has such devastating social, economic, and general health effects.

Adapted from Tools for Fighting the AIDS Pandemic -

A book By Alexander Irwin, Joyce Millen and Dorothy Fallows

WHATSUP WITH MEDICAL FIELD (HIV IN 2016)

1. HIVVACCINE

The first HIV vaccine efficacy study in seven years is currently being conducted to determine whether it prevents HIV infection among South African adults. The study is called HVTN 702. It involves a new version of an HIV vaccine tested 7 years ago in the trial RV144 in Thailand that showed



moderate efficacy (31% protection). The trial will enroll 5400 men and women. This new regimen in HVTN 702 contains 2 experimental vaccines :canarypox vector-based vaccine called ALVAC-HIV and a two-component gp120 protein subunit vaccine with an adjuvant to enhance the body's immune response to the vaccine . It aims to improve on the modest benefit in the previous trial and provide more sustained protection. The trial will run over the course of 3 years with results expected in late 2020. The predecessor trial for HVTN was HVTN 100 that was a safety trial that included 252 study participants.

2. FURTHER IMPROVING ANTIVIRAL DRUGS

Scientists from the MRC Laboratory of Molecular Biology in Cambridge and University College London have discovered a new drug target to treat HIV infection. HIV being a retrovirus copies RNA genome into DNA to infect cells. Previously it was unknown how the virus acquires nucleotides to build its genetic material and how it is able to do this despite creating foreign DNA. It is now known that HIV hides within its surrounding capsid while it builds DNA. The scientists discovered that this capsid may have “pores” that can open and close . While these pores are open nucleotides are sucked in . This helps to explain why HIV is so successful at evading the immune system. Having identified the pores investigators designed a molecule that can block the pores:hexacarboxybenzene. This molecule blocked the pores rendering HIV virus unable to copy itself and become non-infectious. Utilizing hexacarboxybenzene as therapeutic option is not feasible as it cannot cross the cell membrane of human cells to gain access to the virus. But similar drugs can be designed to block pores in the capsid surrounding HIV.



3. REMOVING HIV FROM HUMAN DNA

Researchers from Temple University have succeeded in using CRISPR/Cas9 gene editing technique to build a high-throughput cell-editing platform to effectively eliminate the HIV virus from DNA in immune system's lead fighters, T cells. The edited cells were not susceptible to becoming reinfected again. Research on such gene editing tools may lead to a cure for HIV someday. The eventual goal would be to edit T cells and put them back into patients for treatment.

“Preconceived notions are the locks on the door to wisdom.”

--Merry Browne

STUDENTS CORNER

PARTICIPATION IN WORLD AIDS DAY OBSERVATION ON 1ST DECEMBER

By Prashastee Patel, 1st MBBS Student. PIMSR

AIDS is a word that the whole world knows about. But who knows any bit more than those 4 letters? This was the exact reason for celebrating the World AIDS day at this level. We as medical students spend our lives in books educating ourselves but who will educate those who can't do it for themselves? So this well thought-out initiative was executed in an unparalleled way. Getting out of our daily exhausting schedule we students of PIMSR geared up to enlighten the society bit by bit. Interacting with the rural areas and putting up our ideologies in form of distinctive dramas was not just joyous but enriching too. Those dramas were an embodiment of team spirit, creativity and coordination. It was one of the most remarkable achievements to celebrate World AIDS Day. We made memories, that we will behold for our lives. Such events should be organised to boost the students and help them develop scholastically and co-scholastically too. We all enjoyed our first step towards rejuvenating the society as the future Doctors of this nation and thank the Dept. of Community Medicine, PIMSR for organizing this event.



It is the greatest of all mistakes to do nothing because you can only do little – do what you can.”

--Sydney Smith

STUDENTS CORNER

STUDENT SPOTLIGHT

Ruvaida Idariya, studying in the first year MBBS, at PIMSR has been fond of painting since childhood. She has participated and done well in several painting competitions having ranked 1st in UGVCL, 2nd in ISRO state



level, 3rd in youth festival arts & crafts completion etc.

PRASHASTEE PATEL

Parul Inst. of Medical Sci. & Research

Everyone has enemies. Wishing ill on them is too old-fashioned. Why hold back? If someone wishes ill on you, you should do the opposite. If you want to do bad, go ahead and do it.



Prashastee Patel, a first year MBBS student here at PIMSR participated in the TOI Public speaking competition held in November. After 2 rounds of selection she was chosen among the Top 20 best speakers of Vadodara in the final round she was given the topic - "Don't wish ill for our enemies, just plan it". The TOI daily featured her picture with some lines quoted by her next day on 30 November.

Students Corner by students of 1st MBBS, Guided by Dr. Sajid Saiyad, Assistant Professor, Dept. of Physiology, PIMSR

VALUABLE TIPS FOR STUDENT

Here are some tips and tricks that will hopefully serve to increase your productivity and sensitize your grey matter of brain.

1) Having difficulty to remember certain things






Teaching someone something is a good way to cement your own knowledge on the subject.

2) Addicted to Social Media and other Website ?

Will Power, Self Control and Motivation will encourage you from getting distracted.

3) Break Fast Fruits

Here are some important fruits which will help you to boost your memory.

-  ● Pea d'orange skin : Breast Cancer
-  ● Apple core deformilty : Carcinoma Colon (Finding of double contract barium enema)
-  ● Strawberry tongue : in Sacret Fever, Kawasaki Disease
-  ● Banana Fracture : Paget's Disease
-  ● Cherry Red Spots : Central Retinal Artery Occulsion, Gaucher's Disease.

By Dr. Soeb Jankhwala

"Dare to reach out your hand into the darkness, to pull another hand into the light."

--Norman B. Rice

MEDI – QUIZ

By Dr. Soeb Jankhwala, Assistant Professor, Dept.of Microbiology, PIMSR

1. **Development of vaccine is difficult for AIDS because env gene**
 - a. undergoes mutation at rapid rate
 - b. undergoes reverse transcription
 - c. integrates into large number of host genes
 - d. integrates its genome into that of helper T cells
2. **The confirmatory test used to diagnose HIV antibody is**
 - a. ELISA
 - b. Western blot
 - c. ESR
 - d. PCR
3. **The virus that causes acquired immune deficiency syndrome (AIDS) parasitizes**
 - a. B cells
 - b. cytotoxic T cells
 - c. Helper T cells
 - d. The membrane of lymph nodes
4. **The best treatment for HIV infection is**
 - a. Reverse transcriptase inhibitors
 - b. Protease inhibitors
 - c. Integrase inhibitors
 - d. Highly Active Anti Retroviral Therapy (HAART)
5. **What is most common manifestation of pulmonary disease in HIV infected patients?**
 - a. pneumonia
 - b. carcinoma
 - c. bronchiectasis
 - d. asthma

Answers to be Published in the next Newsletter

Answers to MCQs in previous newsletter

- 1) (a) Follicular carcinoma thyroid
- 2) (b) Due to alteration in penicillin binding proteins
- 3) (d) Windshield glass injury
- 4) (a) Measles
- 5) (d) Trans Esophageal echocardiography
- 6) (a) Gardner's syndrome
- 7) (b) Kartagener's syndrome

"If you judge people you have no time to love them."
--Mother Teresa

This newsletter comes to you with the efforts of our literature club

Dr. Soeb Jankhwala

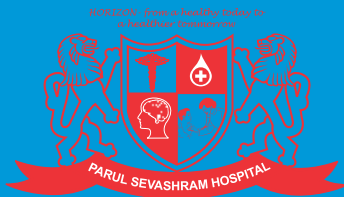
Dr. Chetan Kumar

Dr. Nadeem Shaikh

Dr. Shashwat Nagar

Dr. Nisarg Savjiani

Dr. Nehal Shah



**PARUL
SEVASHRAM
HOSPITAL**

**PARUL INSTITUTE OF
MEDICAL SCIENCES & RESEARCH**

Add : P.O. Limda, Tal. Waghodia, Dist. Baroda - 391760

Tel.: 02668-290900/910 / Tel. Fax : 02668-260201,

Mobile : 98791 85000 / 86000,

E-mail : psh@paruluniversity.ac.in

Web : www.parulsevashramhospital.com

