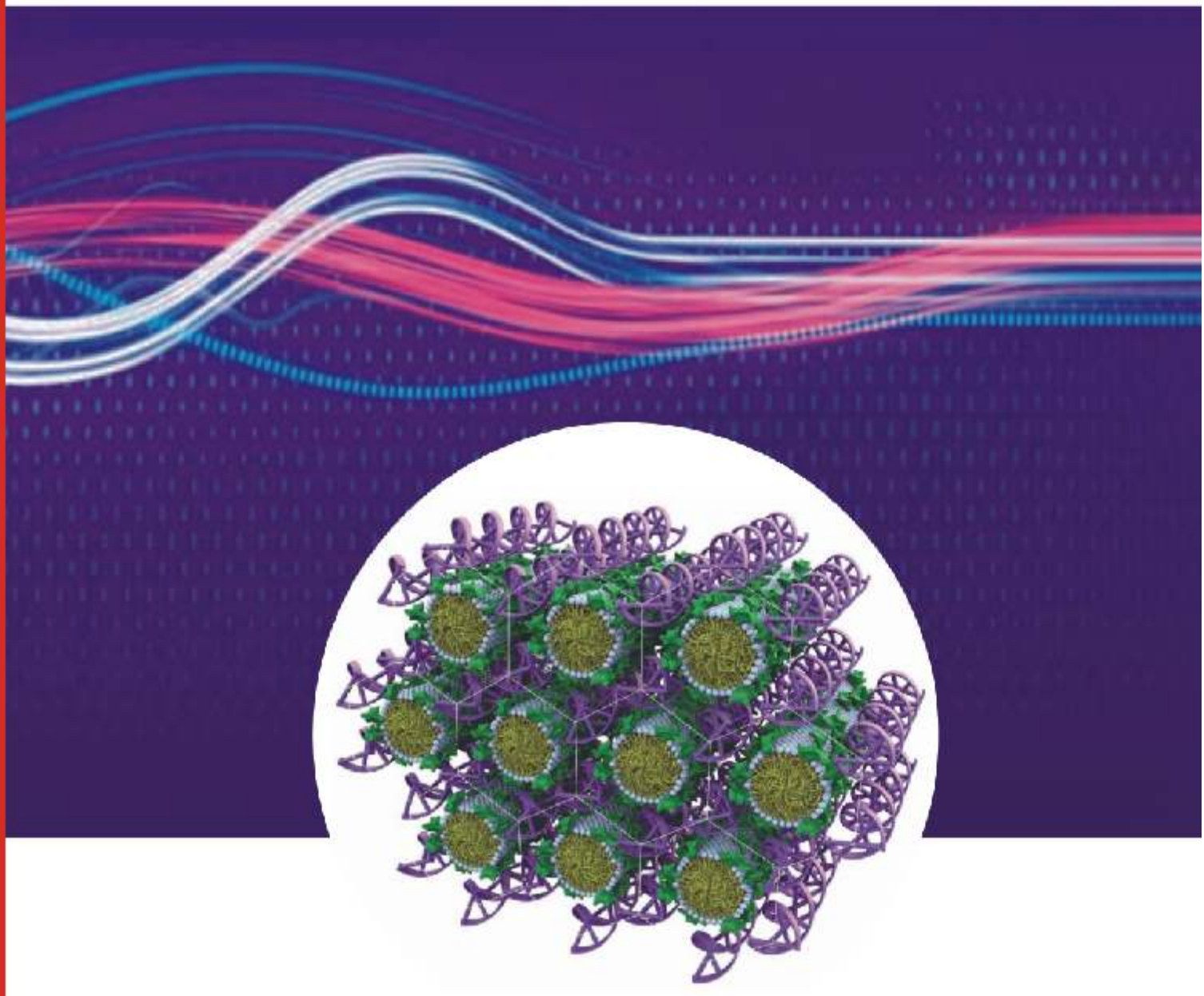
BJKines

To Educate, Inform and Promote

Volume 1 No. 2 October 2009



Official Publication of B. J. Medical College,
Civil Hospital, Ahmedabad and affiliated Institutions

(Health & Family Welfare Department, Government of Gujarat)

Congratulations

Dr. Ketan Desai, Professor and Head, Urology, B. J. Medical College and Civil Hospital, Ahmedabad and President, Medical Council of India, has been unanimously elected President of World Medical Association. He is the first Indian to hold this prestigious position.

It's a matter of great pride and immense pleasure for B. J. Medical College and Civil Hospital, Ahmedabad for his achievements and excellence.

From The Editor's Desk.....

Dear Colleagues,

Season's Greetings...

It gives us immense pleasure to announce the release of second issue of *BJKines*. This quarter has been full of activity with lot of twist and turns. It started with the pandemic of 'Swine flu', an unexpected calamity, which has till today taken the toll of many lives worldwide. Our doctors especially physicians and microbiologists have put in their best efforts to face the challenges. The possible preventive along with the general public awareness measures has been taken by the authorities. Earlier the epidemic of Hepatitis B resulted into lot of trouble and panic. Thus, it seems that the bugs (viruses) are giving us tough time and have become smarter than human beings!

The changing patterns of diseases, their prevalence and drug treatment calls for a serious thought to incorporate them in our medical curriculum and undertake health research. We need to change our traditional teaching to cater to the 'contemporary' requirements and make the medical education more relevant and meaningful. It has also been suggested by Medical Council of India to include new and emerging disciplines in the schedule. Considering this background, we have attempted to publish special articles on Swine flu, Emergemcy medicine and pharmacovigilance in this issue.

The recent news of mandatory scientific publications for promotion of medical teachers sparked off inquires and discussions at editorial office. If these reforms are really observed, it may inspire young generation to publish their research results. After all a professional with 'Good Communication Skills' is the need of the day.

The members are requested to submit their articles as per the format along with the copyright form duly signed by all the authors published in this issue. We look forward for your continuous support to sustain this academic activity. Articles of humor, quiz, cross word puzzle, spot the diagnosis etc. are welcome.

Happy reading.....

Dr. Mira K. Desai

Dr. Bipin K. Amin

BJKines

Official Publication of B. J. Medical College,
Civil Hospital, Ahmedabad and affiliated institutions

B. J. Medical College & Civil Hospital, Ahmedabad - 380016
Phone No. 079 - 22681024 / 22680074, Fax : 079 - 22683067
www.bjmc.org
E-mail : editorsbjkines@gmail.com

BJKines

Contents

Immunohaematology and Blood Transfusion Department at B. J. Medical College and Civil Hospital, Ahmedabad

Transfusion medicine is a multidisciplinary area concerned with the rational use of blood and blood components in the treatment of human diseases. The Department of Immunohematology and blood transfusion at B. J. Medical College, Ahmedabad has been established since October 2004 as a state-of-art facility to provide didactic education and practical training in all aspects of blood transfusion technology, to develop the knowledge required to analyze Immunohaematological problems, to provide experience in blood centre policies such as donor recruitment, collection, preservation, administration of blood and blood components and to educate other medical and technical personnel regarding the judicious use of blood. Aiming towards total dependence on voluntary blood donation, routine preparation of blood components along with strict adherence to quality control at all phases of donor selection, donor room procedures, screening and processing of blood, and serological procedures for grouping and typing of blood are principal hallmarks of the department. The department has also taken a lead in starting a postgraduate course in Transfusion Medicine leading to the award of MD (Immunohematology & Blood Transfusion) for the first time in Gujarat State which has been recognized by Medical Council of India (2009).

The task of establishing this specialized discipline was started way back in 1999 under the able guidance and hard efforts of Dr. R. I. Desai, ex-Professor and Head, Department of Pathology, B. J. Medical College and Dr. Amarjeet Singh, Commissioner of Health, Medical Education & Research, Gujarat state.

Services

The department functions 24 hrs. with state of the art equipments and well trained staff comprising of doctors, technicians, nursing staff, donor counselors and social workers. The services are centered on collection, testing, storage, processing and transfusion of blood, and blood products like packed cells, fresh frozen plasma, platelet concentrate, cryoprecipitate etc. all round the clock. Facility for apheresis and cell separation procedure is also available. Regular blood donation camps are being conducted. In case of national calamity or emergency, blood bank caters to the need of the masses and works in its full swing. In addition, various academic activities in the form of teaching, training, research projects, scientific publications and presentation are also undertaken. Future plan to set up stem cell procedures is under consideration. A list of tests performed and facilities at the department is as follows:

1. Patient's blood grouping and compatibility testing as per demand
2. Bleeding of donors (Voluntary & Replacement)
3. Testing of all bags according to the five mandatory tests as guided by the FDA i.e. HIV I & II, HCV, Bag, tests for syphilis and peripheral smear for malarial parasite
4. Component preparation & storage
    - Red cell concentrate
    - Platelet concentrate
    - Platelet rich plasma
    - Fresh frozen plasma
    - Cryoprecipitate
    - Saline washed red cells
    - Leuco reduced red cells
    - Single donor platelets
5. Cross matching, whole blood and blood components
6. Packed red cells to thalassemia patients
7. Fresh frozen plasma (for factors) to hemophiliac patients
8. Conducting Voluntary blood donation camps
9. Direct and Indirect Coomb's test
10. Newborn baby grouping
11. Autologous blood transfusion program
12. Plateletpheresis and Plasmapheresis

The department is categorized into different sections for smooth and effective operations as follows :

a) Donor Area

Fig.1 : Donor area-Phlebotomy room

The department has a round the clock service to blood donors. The section is air conditioned and well equipped with all modern facilities for hemoglobin estimation, donor station, blood collection monitors, tube sealers, needle destroyer and emergency drugs. The donors are screened for medical fitness especially for hemoglobin and body weight. Only those who fulfill the criteria of a safe and healthy donor are taken up for phlebotomy after predonation counseling. The donors are constantly observed for adverse reactions. At the end they are served refreshments followed by post donation care instructions.

b) Component Separation

Fig.2 : Component separation room

This section deals with the preparation of all blood components like packed red cells, saline washed red cells, leuco-reduced red cells, platelet concentrates, fresh frozen plasma, platelet rich plasma, cryo precipitate. The latest equipments essential for component separation i.e. refrigerated centrifuges, plasma expressor, deep freezers, platelet incubator and agitator, plasma thawing water bath, sterile tube connecting device, laminar flow bench are available.

Fig.3 : Different blood components giving life to three different patients

c) Apheresis

This section performs all types of apheresis procedures like single donor platelet, plasma apheresis, plasma exchange procedure, erythrocytapheresis, and leukopheresis as per the guidelines of FDA. The department has two continuous cell separator CS3000 & Fresenius. Donor apheresis is a special type of blood donation in which a specific component, viz. platelets, granulocytes (white cells) plasma or plasma is withdrawn from the donor using special equipment called as cell separator; the remaining components are returned to the donor's blood circulation. This procedure takes about 90 minutes during which time the donor is constantly monitored by trained medical personnel.

Fig.4 : Apheresis room

d) Transfusion Transmitted Infections(TTI) Testing Section

Fig. 5 : TTI testing area

Every unit of blood and component is screened for HbsAg, anti-HIV 1 and 2, anti-HCV, syphilis and malaria. This activity has been supported by NACO. Routinely ELISA testing for all samples is carried out. However, in case of emergency and non availability of a particular group, the rapid testing of the sample for the speedy issue of blood is performed. The section is well equipped with ELISA SYSTEM (Semiautomatic and Fully automatic), ELISA well washer etc. The reactive bags are discarded as per FDA rules under the guidance of Hospital Waste Disposal Committee.

e) Patient Counter

Fig. 6 : Immunohematology area

Approximately 50 samples per day are received for grouping and cross matching from patients admitted in the different departments of the hospital. Additionally, 25-30 thalassemia patients are supplied with blood per week.

f) Computerization

The blood bank has been fully computerized since April 2005. This facility has helped in a smooth and effective functioning, maintaining the patients as well as donors records, avoiding clerical mistakes and facilitating the interaction with other departments.

List of Products Prepared at IHBT

- *Whole blood*
- *Packed red cells*
- *Saline washed red cells*
- *Platelet concentrate*
- *Fresh frozen plasma*
- *Cryoprecipitate*
- *Platelet rich plasma*
- *Single donor platelets (after getting license for apheresis)*
- *Leuco-reduced red cells*

g) Teaching and Training

- The department organizes training and teaching programs for blood bank technicians, medical officers and resident doctors of transfusion medicine. In addition, CME on "Rational Use of Blood" for the clinical staff and resident doctors is being conducted regularly.
- The department has been recognized as the 'Centre for excellence and training' for all blood banks of Gujarat and assigned the role of a "Model Blood Bank" by NACO.

h) Research Projects

The department has undertaken the following projects,

- "Role of autologous platelet rich plasma in delayed nonunion of fracture or multiple fractures", in collaboration with orthopedic department.
- "Incidence of Cytomegalovirus reactivity in blood donors" funded by Government of Gujarat.

i) Scientific Activities

Publications

1. Blood Transfusion in Neonates, Transfusion bulletin, ISBTI, April, 2005.
2. Comparison of scroreactivity of HIV, HBV, and syphilis in voluntary and replacement blood donors attending blood bank, Civil Hospital, Ahmedabad. *Gujarat Medical Journal*, Dec 2001.
3. Effect of Predonation counseling on Donor Adverse Reactions in *Gujarat Medical Journal*, 2008

Presentations at National Conference (TRANSCON)

- Effect of Pre-donation counseling on Donor Adverse Reactions in TRANSCON 2007 at Bhopal
- Evaluation of sensitivity and comparison of 3rd and 4th generation ELISA assays for detection of HIV I & II, TRANSCON 2008 at SGPGI, Lucknow
- An audit of blood components in a tertiary care hospital of Gujarat in TRANSCON 2008 at SGPGI, Lucknow (Poster presentation)
- Assessment of FFP utilization in a tertiary care hospital of Gujarat in TRANSCON 2008 at SGPGI, Lucknow(Poster presentation)
- Prevalence of cytomegalovirus reactivity in blood donors in a tertiary care hospital in TRANSCON 2008 at SGPGI, Lucknow (Poster presentation)
- Therapeutic plasma exchange (TPE) in Gullian barre syndrome (GBS): the experience of our centre in TRANSCON 2008 at SGPGI, Lucknow(Poster presentation)
- Leucodepleted Red cells-Need of the day in TRANSCON 2008 at SGPGI, Lucknow(Poster presentation)
- Prevalence of co-infection of HIV, HbsAg & HCV in blood donors of Gujarat in TRANSCON 2008 at SGPGI, Lucknow(Poster presentation)

Gujarat Cancer and Research Institute - An Overview

(Regional Cancer Centre & Member of International Union against Cancer)

Website: www.cancerindia.org

Gujarat Cancer and Research Institute (GCRI), with a multidisciplinary approach between cancer care, research and education, intends to provide great hope to the patients and the general population. The institute believes in the world class cancer research, state of art therapeutics and extensive educational efforts regarding prevention, detection, treatment and palliation to improve the quality of life of patients. The mission has been achieved by the contribution of its dedicated members and collaboration with other cancer organizations, research laboratories and pharmaceutical research establishments. In 1975, GCRI became member of International Union against Cancer.

GCRI is a Regional Cancer Centre recognized by Government of India and a postgraduate teaching centre affiliated to B. J. Medical College, Gujarat University. It is also recognized by Gujarat University for specialty courses like M.Ch. (Oncology), D.M. (Oncology) and M.D. (Radiotherapy), and for Ph.D. studies. It also offers Diploma in Medical Laboratory Technology certification every year. Today, GCRI is a 650 bedded comprehensive cancer centre with 22,684 new cancer and non cancer cases registered and 2, 22,899 outdoor patients visited in the year 2008. The Institute has 70 PG students, 42 medical PG teachers and 6 Ph.D. guides recognized by Gujarat University.

The various clinical departments include Surgical oncology, Medical oncology, Pediatric oncology, Gyneconcology, Radiation oncology, Radio diagnosis, Bone marrow transplantation, Anesthesiology, Laboratory medicine, and Physco-oncology. Surgical oncology has super specialty clinics in the form of Uro-oncology, Interventional therapy centre, Musculoskeletal services, Plastic and reconstructive services, Neuro-oncology services and Opthalmological services. The ancillary services for patient care includes nursing services, physiotherapy, stoma clinic and speech therapy, prosthesis and rehabilitation centre, pharmacy and general administration. The Pediatric oncology centre undertakes treatment of leukaemia through a National Cancer Institute, USA Protocol Programme. A well established Clinical research wing undertakes several clinical trials for newer drugs and treatment modalities.

Separate administrative arrangement in the form of research and education services has helped the institute to organize its research and educational activities. The principal areas include the Research wing (cancer biology department), educational activities, library, educational graphics and medical into photography. The research wing is further divided into areas like Cell biology, Molecular endocrinology division I and II, Receptor and growth factor laboratory, Biochemistry research, Immunohistochemistry, Medicinal chemistry and Pharmacogenomics. Community Oncology and medical records department works in three different areas - a) State/National Cancer Registry Programme, b) State/National Cancer Control Programme, under the state programme four satellite cancer centers have been created to carry out cancer screening, diagnosis and treatment, and c) Cancer Epidemiology.Community Oncology Centre, Vasna, houses several activities. Prominent among them are the Hospice care, permanent care as well as tobacco deaddiction related exhibition, cancer related health check up and medicinal plantation.

Dr. Pankaj Shah, Hon. Director, honored with Dr. B.C.Roy award by the President of India Mrs. Pratibha Patil for his valuable contribution in the field of Medicine

Government (C.L. & S.C.) Spine Institute,Physiotherapy College and P & O College, Ahmedabad-16 (Paraplegia Hospital)

सत्यमेव जयते

Civil Hospital Campus, Ahmedabad - 380 016, Gujarat, INDIA
Tel. Director :(079) 22680471 General :(079)22681258 Fax:(079)22680471
E. mail:paraplegiahospital@vsnl.net, www.paraplegiahospital.org <http://www.paraplegiahospital.org/>

Government Spine Institute caters to provide state of art rehabilitation and therapeutic services to the patients with spinal cord injury and other disability. The institute is dedicated to a scientific attitude and human approach to rehabilitation and treatment of disabled patients with innovation and creativity in the field of research and clinical applications. Its scope encompasses various health services, educational programmes, research and training of postgraduates and physiotherapy students and collaboration with voluntary and social welfare departments and non government organizations.

Institute has the capacity of 60 beds and conducts out patient department on Monday and Thursday afternoon. The institute is affiliated to B. J. Medical College and Civil Hospital, Ahmedabad.

Fig.1 Government spine institute at B. J. Medical College and Civil Hospital campus

Health Care Facilities

Orthopedic

Under the dynamic leadership of Prof (Dr.) M. M. Prabhakar along with well trained team of doctors, all kind of spine surgeries are performed. The department has the facility of well equipped operation theatre with modern and hi-tech equipments and surgical instruments.

Physiotherapy

A full-fledged and well-equipped Physiotherapy department with modern equipments like E.M.G./N.C.V., Laser therapy, Gait Laboratory (Gait trainer and Gait analyzer), Isokinetic exerciser, Microwave Diathermy, interferential therapy, ultrasound therapy, exercise treadmill, rowing machine, exercise therapy and electrotherapy equipments are available.

Fig.2: EMG and nerve conduction velocity assessment

Occupational Therapy

The department gives vocational rehabilitation, sports activities, A.D.L. training, coordination exercises, functional aid training, to the indoor and outdoor patients daily. The approach to the treatment by therapists differ by undertaking therapeutic activities, work, play etc. in a scientific way to achieve a goal of maximum independence so that patients can live a near normal life and enjoy their livelihood.

Prosthetic and Orthotic Workshop

All the OPD and indoor patients at this institute are given aids and appliances from the Prosthetic & Orthotic workshop as per their requirement prescribed by the orthopedic surgeons. Orthotic & Prosthetic appliances for Polio, Paraplegia, C.P., Fracture orthosis, Spinal orthosis , upper and lower limbs etc. are prepared at this workshop.

Fig.3: Electro mechanical devise (Prosthesis) assembled in patient with upper limb amputation

The Center of Healing Arts - Dr. Dinesh G. Patel Psychomotor Laboratory

This is the first of its kind in India and Asia, started in December, 2001. The Laboratory consists of a complete operation theatre with all essential arthroscopy instruments and accessories along with joint models to learn and perform a mock surgery on them. Presently, a number of workshops and hands on training with live surgical demonstration have been organized on knee and shoulder models for upcoming orthopedic surgeons and postgraduate students from all over India. Around 1500 doctors and postgraduates students have been trained at this laboratory.

A Leg to Stand on Project

The project has been jointly started with Government of Gujarat and a New York based NGO in February 2003. The mission is *'To transform the lives of children with limb disabilities in Gujarat'*, India by offering them physical capabilities, to access the opportunities earned through education, work and mobility. Children below the age of 18 years are given good quality of prosthesis and orthosis free of cost under this project. The project has been sponsored by A Leg To Stand On Inc., New York. To date 304 artificial limbs have been given free of cost to children below 18 years of age.

The centre has been sponsored by Mahavir Viklang Sahayata Samiti and was inaugurated by the Hon. Health Minister of Gujarat, Shri Jaynarayan Vyas on 20th September, 2008. Under this project, Jaipur Foot is given to all disabled, free of cost. In addition, wheel chairs and tricycles are also given to indoor patients.

Fig.4: Worker preparing indigenous orthosis in orthotic workshop

Educational Programme

Government Physiotherapy College

The Government Physiotherapy College attached to the Government Spine Institute, was started in 1992. Presently, the admission capacity is 100 students per year. It is affiliated to B. J. Medical College & Civil Hospital and Gujarat University. Admission to this Course is done through centralized admission along with MBBS and BDS. The college has also started Master in Physiotherapy (MPT) with 18 admissions per year.

Orthotic and Prosthetic College

This is the first and only course of its kind in Gujarat State with 10 admissions per year. The college was started in 2005. The eligibility for admission is XII science pass which is done through Centralized Admission Committee along with other courses.

Fig.5: Tilt table mobilization for spinal cord injury patients for early rehabilitation

Research Projects

Handicap International and Department of Health & Family Welfare, Government of Gujarat jointly implemented a project on *"Early identification and intervention for the prevention of disability and its complications"*.

A Pilot project in the Ahmedabad district has been completed from June 2003 to May 2004. Thereafter two more districts, Kachchh and Surendranagar has been covered from May 2004 to December 2005. Training programme was undertaken in seven more districts i.e. Mehsana, Patan, Anand, Vadodara, Sabarkantha, Banaskantha and Gandhinagar from October 2001 to December, 2007.

Scaling up the same initiative, from this year, Department of Health & Family Welfare, Gujarat State and Handicap International has jointly implementing a similar project entitled *"Inclusion of Disability issues into the Public Health System of Gujarat"* in remaining sixteen districts of the state i.e. Ahmedabad, Amreli, Bharuch, Bhavnagar, Dahod, Dang, Jamnagar, Junagadh, Kheda, Navsari, Panchmahal, Porbandar, Rajkot, Narmada, Surat and Valsad. Training prgrammes for the first year in four districts (Ahmedabad, Panchmahal, Rajkot, and Dahod) has been completed in February 2009. For the second year the programme has been started from March 2009 for Amreli, Jamnagar, Junagadh and Porbandar. Director of Spine Institute is the State Project Coordinator and Spine Institute is selected as nodal agency. The project is sponsored by Government of Gujarat, European Commission and Handicap International.

Paraplegia Safari

Most of the patients attending the Government Spine Institute are from poor family and remote areas. Hence could not attend the hospital for follow up. To help these poor paraplegic and disable patients, the Institute has started a noble project *"Paraplegia Safari Programme"*, to visit the door steps of the paraplegia patients discharged from hospital to assess their condition, give suitable advice, further treatment if any, assess the bed sore problems, vocational activities, uses of aids and wheel chair etc. The Safari staff consists of orthopedic surgeons, Physiotherapist, Occupational Therapist, prosthetist/ orthotics, medical social worker and nursing staff. The institute has arranged total 70 *Paraplegia Safari programmes*, covering 6325 patients including 290 earthquake paraplegia victims.

Fig.6 : Vocational training for spinal cord injury and cerebral palsy patients

Other Activities

The center is also closely associated with various voluntary agencies and social welfare department, Blind men's Association and provides wheel chairs, tricycles, other aids, medicines etc. to the poor paraplegia patients through these agencies.

The institute also entertains the paraplegia patients by organizing programmes with active participation of patients. The institute celebrates Independence Day, Republic Day, Kite flying Day, Raksha Bandan Day etc. with sports competition to the indoor paraplegia patients. Prizes are distributed to the winners through NGOs. The needy and poor patients are also given wheel chairs, tricycles, sewing machines, articles for small business according to their ability and choice during the function.

M & J Western Regional Institute of Ophthalmology, Civil Hospital, Ahmedabad- A Profile

M & J Western Regional Institute of Ophthalmology is the biggest tertiary eye care centre in Gujarat providing eye care facilities to the patients of Gujarat and other states of western India. It has 250 beds for indoor patients and around 1,50,000 patients are being treated in out patient department every year.

Eye Care Services

Under National Programme for Control of Blindness & VISION 2020(2008-2009) following activities were conducted:

- School Health Programme: screening and treatment like spectacles and medicines of eye diseases in around 40,000 school children (free of charge) .
- Eye Bank & Research Centre: corneal transplant surgeries in 405 eyes of patients out of 635 donated eyes.
- Cataract camp: Screening, diagnostic and surgical camps for cataract patients provides free intra ocular lenses and medicines.
- Free camp services for diagnosis & managements of various eye diseases in more than 18,000 patients.

Fig.1 : Screening of children under school health programme

Educational, Research and Awareness Activities

- Training of Undergraduate, Postgraduate students and ophthalmic assistants by experienced faculties.
- Celebration of eye donation fortnight and eye donation rally (25th August - 8th September 2008).
- Celebration of *World Sight Day* (8th October 2008): The function was graced by presence of Honorable Health Minister Shri Jay Narayan Vyas & Commissioner of Health, Dr. Amarjit Singh.
- Celebration of *World Glaucoma Day* (12th March 2009).
- Workshop on *Low Vision Devices* (8th-9th April 2009).
- A radio talk on 'eye care after 40 yrs of age' by Dr. D. C. Mehta and other related subjects by faculty members.

The institute is conducting specialty OPDs like Cornea, Retina, Oculoplasty, Squint, Glaucoma and Contact Lenses with fully functioning high technology equipments like FFA, YAG laser, operating microscopes and phaco machines, NCTs, Perimeter, ocular USG and UBM machines, Pachymeter, Topography machines, specular microscopes, computers etc. The institute has well trained dedicated staff to take care of eye diseases of patients in trauma centre and other hospitals within the campus. Recently, 97 patients out of 282, of *methyl alcohol poisoning* were treated in civil hospital. Among them, vision of 96 patients was saved by intensive efforts of experts and experienced team of ophthalmologists.

Government of Gujarat has been helping the institute in their mission of *Right For Sight* by providing more latest eye care equipments and planning a new well framed building for the better than the best eye care services.

Fig.2 : Display of low vision devices

Scientific Activities at B. J. Medical College and Civil Hospital, Ahmedabad

Anatomy Department

- Undertaken research project entitled " Study of facial features & facial indices of various races of Gujarat state and to find any unique facial characteristics " by Dr. V. B. Kariya, Dr. H. R. Jadav and Dr. B. B. Kodiatar.
- Published an article entitled "Embalming & Body donation - An experience" in *Gujarat Medical Journal*, Vol 2, No.7. 2007 by Dr. Rupal Gautam et al.
- Organised a guest lecture on 'Stem Cells therapy' by Dr. Shalin Thakor on 17th Sept. 2009.

Community Medicine

- Training Program
  - ICTC three days Team training for three batches
  - HIV-TB training for Medical officers and counselors of ICTC centers
  - EPI INFO training program for data analysis to the resident doctors
  - "Outbreak Investigation training for resident doctors of Community Medicine" of B.J. Medical College and Smt. N.H.L. Municipal Medical College, Ahmedabad
- Public Health Activities
  - Celebration of World Breastfeeding week, 1st August to 7th August, 2009
  - Health education campaign for Swine flu in field practice area of Urban Health Centre (MALA)
  - Verbal Autopsy of deaths due to Dengue fever

Obstetric and Gynaecology Department

- Dr. Ajesh Desai was awarded WHO fellowship in community health care and research for 4 weeks in Khon Kaen, Thailand.
- Dr. Ajesh Desai is the State coordinator for Global surveys in Maternal Health by WHO national level for Operationalising First Referral Units by Trained MBBS doctors in emergency obstetric care
- Guest lectures by Dr. Haresh U. Doshi
  - 'Gestational Diabetes' at Bangalore ObGy society in June 2009
  - 'Fibroids uterus' at Manipal ObGy society in July 2009
  - 'Bad Obstetric History' in PG series at Trichur August 2009
  - 'Fibroids Pre-surgical- World congress on recent advances in ObGy' at Mumbai in September 2009
  - 'Cardiac diseases in pregnancy' at FOGSI satellite conference August 2009
- Scientific Publications
  - 'Saving Mothers and Newborns through Innovative Partnership with Private Sector Obstetricians in Gujarat India' *Lancet* 22nd March 2009 by Dr. Ajesh Desai.
  - 'Cleidotomy for shoulder dystocia-still a role in modern obstetrics', *Obs & Gynae Today* April 2009; 14 : 195 by Dr Haresh U. Doshi
  - 'Cesarean section: changing indications and techniques - a survey', *The Journal of Obstetrics & Gynecology of India*. March 2009; 59: 140
  - 'Epidural analgesia in high risk patients during labor' *J K Science*. July 2009; 11: 130 by Dr. Haresh U. Doshi

Pediatric Department

- Dr. Bharat Parmar organized central IAP nursing and post graduate quiz and sent the winners for divisional round at Baroda and Surat Medical College in August 2009

Pharmacology Department

- Scientific Publications,
- 'Changing face of Pharmacology Practicals for Medical Undergraduates' an editorial in *Indian J Pharmacol.* August 2009 by Dr. Mira Desai
- 'Ragging, Lets say No to it', an editorial in *Indian J Pharmacol.* April 2009 by Dr. Chetna Desai
- Guest lectures by Dr. Mira Desai,
- 'ADR reporting and Causality assessment' at training programme on Pharmacovigilance for ASU medicines, sponsored by Ayush, Department of Health and FW, Government of India, at Jamnagar, June 2009.
- 'Clinical pharmacology of ARV drugs', at Training for specialist and medical officers on HIV care and ART treatment' at ART center September 2009.
- Guest lectures by Dr. Chetna Desai,
- Pharmacovigilance and ADR reporting at CME on Pharmacovigilance for ASU medicines, Sponsored by Ayush, Department of Health and FW, Government of India, at Thiruvantapuram, August 2009.
- Interactive Learning techniques and Problem Based Learning at the GSMC FAIMER Fellowship Programme at Mumbai, June 2009.

Skin and VD Department

- Dr. Bela Shah and Dr. Kirti Parmar has undertaken the organization of DERMAZONE WEST 2009 under IADVL GSB on 4th, 5th, 6th December 2009 including a pre-conference workshop on Dermatosurgery.
- Special clinics for Leprosy, STD, Collagen Vascular Diseases, HIV, Pulse therapy, Acne, Post-acne scarring, Dermatosurgery have been arranged.

Gujarat Cancer & Research Institute

Research Projects

60 - funded by Gujarat Cancer Society, Government of Gujarat, Gujarat State Biotechnology Mission (GSBTM), Directorate of Medical Education & Research (DMER), Gujarat Council of Science and Technology (GCST), Department of Biotechnology (DBT), Department of Atomic Energy (DAE), Indian Council of Medical Research (ICMR) - IndoGerman Collaboration, Indian Council of Medical Research (ICMR), IARC, France.

Publications

- 85 in state/national/international journals in this year.

Scientific Programme

- 'Infection Prevention Microbiology', workshop for Government hospitals of Gujarat state, February 2-7, 2009
- Surgical Pathology, CME, February 8, 2009
- Genetic Diagnostics, training , March 2-7, 2009

Influenza A, H1N1 "Swine Flu"

*Asha. N. Shah**

Introduction

Influenza A, H1N1 swine flu, or Novel H1N1 is a new strain of the flu that moved from pigs to humans and can be transmitted from human to human. The illness with the new H1N1 (Swine) flu virus has ranged from mild to severe. While the vast majority of people with Swine flu have recovered without any medical treatment, hospitalizations and deaths have also been reported. The current influenza pandemic is different from seasonal flu by lack of immunity in human population and the new strain of the virus. This new virus was first detected in Mexico. Since then, it has spread from person to person worldwide, probably in the same way as that of seasonal influenza viruses. On June 11, 2009, WHO signaled a pandemic of novel H1N1 flu.

Virus

There are three main types of influenza viruses- A, B and C.

Type A influenza viruses: affect multiple species including humans, birds, horses and other animals. It can cause severe epidemics among all ages and is considered the most virulent group. It is classified into subtypes based on two surface antigens known as hemagglutinin (HA) and neuraminidase (NA). Hemagglutinin allows the virus to get attached to host cells and initiate infection to susceptible cells while neuraminidase allows the virus to be released from the infected cell.

Influenza type B viruses: are quite common in humans, but the clinical disease is usually less severe than influenza A. Epidemics do occur, but are seen less often than type A.

Influenza type C viruses: have been identified in both humans and swine. They usually produce mild or no clinical symptoms. It has been found that most individuals have antibodies to influenza C by the age of 15.

* Professor and Head, Medicine,
B. J .Medical College, Ahmedabad.

Novel H1N1

The current infection was referred to as "swine flu" because many of the genes in this new virus were very similar to influenza viruses found in pigs in North America. However, further study has shown that this new virus is different. Evidence suggests that influenza virus responsible for pandemics and current H1N1 pandemic contained gene segments from pigs, avians and humans. Scientists call this a "Triple or quadruple reassortant" virus. The genetic recombination of human with animal/avian virus leads to novel subtype different from parent viruses. If the novel subtype has sufficient genes from H1 viruses, it is transmissible from person to person and may cause pandemics.

Current Epidemic

Cases in India

The first case was seen on May 16th when a 23 year old from USA was detected positive in Hyderabad. Since then, 64,524 people have been tested for Influenza A H1N1 in Government laboratories. Total number of people infected (lab. confirmed cases) of H1N1 are 11,253 and total deaths are 369 cases as on 6-10-09. Maharashtra has recorded the maximum number of cases (3106) and deaths (147) in the country. First case seen in Gujarat was on July 6th at Ahmedabad when a Thai national was detected positive. The most common age group affected was 13 - 45 years as shown in the table 1.

Table1 : Age and gender wise distribution of H1N1 cases in Gujarat as on 7-10-09

Age (years)	No. of cases	No. of deaths
0-12	26	3
13-45	179	28
>45	21	5
Gender		
Male	152	21
Female	74	15
Total	226	36

Case Definitions by CDC (as of May 5, 2009)

Confirmed Case

A person with acute febrile respiratory illness with laboratory confirmed H1N1 influenza A virus detected by real time reverse transcriptase PCR (RT-PCR) or viral culture.

Probable Case

A person with acute febrile respiratory illness who is positive for influenza A but negative for H1 and H3 by RT-PCR.

Suspected Case

A person with acute febrile respiratory illness who develops symptoms within seven days of close contact with a person with confirmed case of H1N1 influenza or develops symptoms within seven days of travel or resides in a community where there are one or more confirmed H1N1 influenza A cases.

Mode of Infection

The transmission is by droplet and fomites, mainly from person to person when an infected person coughs or sneezes and spreads tiny particles into the air. It can also be transmitted by touching the objects with flu viruses on it, and then touching the mouth, nose or eyes.

Clinical Features

The common clinical presentation includes fever, cough, sore throat, body aches, headache, chills and fatigue. Diarrhea and vomiting have also been observed. Children, pregnant women, immunocompromised, chronic medical conditions like renal, cardiac, hepatic and other respiratory illnesses, diabetes mellitus, occupational exposure especially paramedicals and doctors are high risk groups and the symptoms may exacerbate in these patients. They are also prone to develop complications like pneumonia, respiratory failure, toxic shock like syndrome and death. The common symptoms of hospitalized novel H1N1 patients as per CDC, USA are as follows:

Symptoms	Number (%)
Fever	249 (93)
Cough	223 (83)
Shortness of breath	145 (54)
Fatigue/Weakness	108 (40)
Chills	99 (37)
Myalgias	96 (36)
Rhinorrhea	96 (36)
Sore throat	84 (31)
Headache	83 (31)
Vomiting	78 (29)
Wheezing	64 (24)
Diarrhea	64 (24)

Complication (Cytokine storm)

It is the systemic manifestation of a normal and vigorous immune system resulting in the release of more than 150 inflammatory mediators. The exaggerated immune response is caused by rapidly proliferating and highly activated T cells or natural killer (NK) cells and the condition is referred as a "Cytokine storm". The cause of death in these patients is usually acute respiratory distress syndrome (ARDS) resulting from the cytokine storm, and not directly from the virus.

Symptoms

It is commonly manifested as multi-system organ failure, hypotension (myocarditis), tachycardia, ARDS (respiratory failure), ischemia, or insufficient tissue perfusion and uncontrollable haemorrhage. The following warning signs of impending cytokine storm are suggestive of immediate hospitalization,

- Fast breathing or trouble breathing,
- Bluish or gray skin colours
- Severe or persistent vomiting
- Not waking up or not interacting
- Extreme irritability

- Initial improvement followed by recurrence of fever and worse cough
- Chest pain, dizziness

Revised H1N1 Guidelines by Ministry of Health & F.W. (Govt. of India) on 14/8/09

The guidelines categorizes the patients into A, B and C for an effective management.

Category A

Includes cases with following symptoms,

- Mild fever, cough/sore throat, bodyache, diarrhea, vomiting
- No testing is required
- Oseltamivir is not required
- Patients should be monitored, reassessed after 48 hrs. and advised to be confined at home.

Category B

Category B is further divided into B1 and B2

- B1- those with symptoms of category A and associated high grade fever, sore throat (granular pharyngitis) requires home isolation and may require oseltamivir
- B2- with symptoms of category A along with high risk conditions like age less then 5yrs. or more than 65 yrs., pregnant women, patients with lung, heart, liver, kidney or blood disorders, diabetes mellitus, neurological disorders, cancer, HIV/AIDS and steroid therapy.
- Treatment with oseltamivir is needed
- No tests for B1,B2 required
- Home isolation is must

Category C

In addition to symptoms of category A and B, the patients with the following symptoms,

- Breathlessness, chest pain, drowsiness, hypotension, hemoptysis, cyanosis
- Irritability in small children, refusal for feeds
- Worsening of underlying chronic conditions

Category C patients require testing, immediate hospitalization and treatment.

Testing for H1N1

For confirmation of diagnosis, clinical specimens such as nasal wash, nasopharyngeal aspirate or swab are to be obtained. Personal protective equipments like gown, gloves, N95 mask and eye protection are necessary prior to obtaining sample. The samples should be labeled as "swine flu suspected" and transported to lab on ice or refrigerate. RT-PCR method is used to confirm the H1N1 cases.

The patients are contagious as long as they have symptoms, and up to 7 days after they become sick. Children, especially infants, may be contagious for longer periods. Viruses can live 2 hours or longer on surfaces like tables, desks, and door knobs. Respiratory specimen should be collected within 4 to 5 days of illness. Influenza virus is destroyed by heat (167-212°F [75-100°C]). In addition, several chemical germicides, including chlorine, hydrogen peroxide, detergents (soap), iodophors (iodine-based antiseptics), and alcohols are effective against human influenza viruses if used in proper concentration for a sufficient length of time. For example, wipes or gels with alcohol in them can be used to clean hands. The gels should be rubbed into hands until they are dry.

General Precautions for Prevention of H1N1 Infection

- Frequent hand washing
- Covering coughs or sneezes and thrash with the tissue paper
- Avoid crowded places
- Advise ill persons to stay home (except to seek medical care) and minimize contact with others in household

- Avoid touching nose, eyes and mouth
- Voluntary home quarantine of contacts with confirmed or probable swine influenza cases
- Avoid close contact with sick people. Keep more than 1 meter distance for protection.
- Use disinfectants for surfaces (especially bedside tables, bathroom surfaces , kitchen counters and toys)
- Avoid unnecessary migration of people from epidemic and endemic areas

Drug Treatment

Influenza cases can be managed by specific antiviral drug.

Oseltamivir (Tamiflu) is an oral neuraminidase inhibitor and has been widely used for managing human cases of avian influenza and that resulting from pandemic influenza. It has been used for chemoprophylaxis as well as treatment of swine flu. It is available as capsules (75mg) and as pediatric suspension (12mg/ml). The drug has also been approved by the US FDA for use in children. It blocks the active site of the influenza viral enzyme neuraminidase and results into viral aggregation at the host cell surface that reduces the number of viruses released from the infected cell. The drug is well tolerated and has minimal, non-serious side effects like nausea, vomiting and diarrhea. Occasionally, it may cause neuropsychiatric manifestation like insomnia, altered behavior etc. Zanamivir is another neuraminidase inhibitor that is used in the inhalation form. However, the drug may cause bronchospasm. Hence it is not recommended for patients with respiratory disease such as asthma or COPD. The evidence of therapeutic benefits from antiviral treatment are strongest when the drug treatment is initiated within 48 hours of onset of symptoms. The duration of treatment is five days. However, the seriously ill patients may require longer treatment and higher doses.

Table-2 : Dosage Schedule of Oseltamivir

Medication		**Treatment (5 days)**	**Chemoprophylaxis (10 days)**
Adults		75 mg BD	75 mg OD
Children > 12 months Body Weight (kg)	Body Weight (lbs)		
=15 kg	=33lbs	30 mg BD	30 mg OD
> 15 kg to 23 kg	>33 lbs to 51 lbs	45 mg BD	45 mg OD
>23 kg to 40 kg	>51 lbs to 88 lbs	60 mg BD	60 mg OD
>40 kg	>88 lbs	75 mg BD	75 mg OD

Table 3 : Dosing recommendations of oseltamivir in children younger than 1yr.

Age	**Recommended treatment dose for 5 days**	**Recommended prophylaxis dose for 10 days**
Younger than 3 months	12 mg twice daily	Not recommended unless situation judged critical due to limited data on use in this age group
3-5 months	20 mg twice daily	20 mg once daily
6-11 months	25 mg twice daily	25 mg once daily

Chemoprophylaxis

Recommended for household close contacts of confirmed, probable, or suspected case or health care workers exposed to confirmed or suspected cases of H1N1. Oseltamivir is given for pre and post exposure cases during the exposed period and 7 days after last known exposure to ill confirmed case of swine influenza A (H1N1) virus infection. The dosage schedule for adults and children is shown in table 2 and 3.

Vaccine

There are two different vaccines available in USA to protect humans from swine flu. Monovalent Nasal-Spray Flu Vaccine (Live Attenuated Influenza Vaccine [LAIV] and inactivated 2009 H1N1 vaccine (injectable). Vaccine for human seasonal influenza does not protect against H1N1 swine flu viruses due to antigenic differences, but may provide partial protection against swine H3N2 virus.

Conclusion

A world wide outbreak due to H1N1 virus for which human beings have no immunity has been a major threat. Clinicians should have a high degree of suspicion for H1N1 in patients with severe upper or lower respiratory infection. The suspected cases of category B1, all B2 should be treated with oseltamivir. The treatment should be started early to reduce mortality and progress of the disease. All cases having URTI with high grade fever, LRTI, and category C should be suspected for H1N1 infection unless proved otherwise. The patient should be hospitalized and isolated immediately. Testing of H1N1 should be done and treatment with oseltamivir should be started without waiting for the report. H1N1 is a low mortality virus but early treatment of severe disease is important to avoid complication and save the life of patient. Vaccines for Novel H1N1 are available in USA and distribution has been started in selected population. Proper and frequent hand washing is very important for prevention of the disease along with other precautions.

Patients having URTI with high grade fever, LRTI, and category C should be suspected for H1N1 infection unless proved otherwise. Novel H1N1 is a low mortality virus but early treatment of severe disease is important to avoid complications and save the life of patient.

References for further reading

<http://www.who.int.en/>

http://www.cdc.gov/h1n1flu/updates/us/

Emergency Medicine : An Emerging Specialty

*Sharad Vyas**

Background

Emergency Medical Services Act - Gujarat [EMSA] has been passed by the Health Department, Government of Gujarat in 2007. Under the act, provisions are made to provide uniform, high quality medical emergency care to all the patients irrespective of their status at all the government, corporate, private and trust hospitals of the state. Standard protocols based on the various parameters have been framed to provide quality emergency care. Emergency Medical Service (EMS) authority created under the act is to guide and enforce the criteria of emergency medical care. As a foundation of such care, development of emergency medicine is essential. However, setting up Emergency Medicine (EM) as a discipline is a challenging task. The historical and statistical aspect of this discipline is as follows:

- First emergency medicine training program (residency) was established in 1970 in USA
- EMS Act - Established Nationwide 911 service was passed by Congress in 1973 in USA
- Specialty recognition for EM by American Board of Medical Specialties in 1979. However, more than 20 years later EM became a primary medical specialty board
- Currently there are over 21,000 board certified emergency physicians and more than 172 emergency medicine residency programs in the U.S.

Management of Medical Emergency

Chain of Survivor

There are four stages called chain of survivor in management of any medical emergency which includes trauma.

- First phase- Pre-hospital
- Second phase - Emergency [Medicine] department
- Third - Definitive management in respective specialty
- Fourth -Rehabilitation

First phase : Pre hospital care is now well established with 108 ambulance services and trained staff working in it. However, it can be further improved as quality base assessment is yet to be done.

Second phase : Most neglected area is emergency care in hospital especially at first contact point. The most junior person who is not well trained, involvement multiple departments, investigations takes time. Hence, these delays the management and at times results in fatality and increases the morbidity. This phase has not been considered and requires to be developed.

Third and fourth phase: Definitive care and rehabilitation are third and fourth stage of emergency management are very well recognized and developed at the institute. This has been provided by the specialist of various branches.

Definition

Emergency Medicine is a medical specialty in which a physician receives practical training to treat patients with acute illnesses or injuries that require immediate medical attention. Emergency medicine physicians diagnose a variety of illnesses and undertake acute interventions to stabilize the patient.The physicians practice in pre-hospital settings via other locations where initial medical treatment has taken place and also at Intensive-Care Unit. Just as clinicians operate by immediacy rules under large emergency systems, emergency practitioners aim to diagnose emergent conditions and stabilize the patient for definitive care.

* Director-EMSA , Professor & Head, Emergency Medicine, B. J. Medical College, Ahmedabad.

The clinical EM includes an initial evaluation, treatment, and disposition for any symptom /disease /complaint in the first 2 or 3 hours of onset. There are three components to the Model:

1. An assessment of patient acuity
2. A description of the tasks that must be performed to provide appropriate emergency medical care; and
3. Listing of common conditions, symptoms, and disease presentations.

The Model represents essential information and skills necessary for the clinical practice of EM and differentiate it from the clinical practice of other specialties. Patients often present to the emergency department with signs and symptoms rather than a known disease or disorder. Therefore, an emergency physician's approach to patient care begins with the identifying the patient's presentation that point to a specific diagnosis. This is the hallmark and cornerstone of the clinical practice of Emergency Medicine, guiding the diagnostic tests and therapeutic interventions during the entire patient encounter.

The Team

- Specialized emergency physicians
- Specialized emergency nurses trained in Pediatric acute life support, Acute cardiac life support, Acute trauma life support, and Trauma nursing course certificate
- Specialized emergency technicians
- Certified nurse practitioners
- Emergency medical technicians-paramedics

Role of an Emergency Physician

Evaluate the patient, determines extent of problem and carry out immediate intervention in critical or life threatening situation. The evaluations may include Pediatric, Obstetric and Gynecology, Trauma, Psychiatric etc. The various diagnostics and investigative tools used are bedside ultrasound, CPR, pulse oximeter, blood glucose testing etc. The physician works as a detective to determine the cause of a patient's complaint and investigates through history, physical exam, lab results, and radiographs. Based on the diagnosis, the treatment is initiated. Collaboration with other specialists is often required. The common procedures carried out includes intubation, cardio version, suturing, minor surgical procedures, bedside ultrasound, chest tubes, central venous lines, thoracocentesis, paracentesis, pericardial centesis, fracture/dislocation reduction etc.

The Present

Till today, emergency care is provided by an informal arrangement of physicians who worked in emergency rooms as part of their hospital duties having primary discipline in other subject. However, the physicians are neither specialized nor trained in emergency medicine.

What needs to be done?

To provide integrated emergency medical care, there is growing demand of the specially trained physician in emergency medicine. Gujarat State has already initiated the action in this direction. Further, a Post Graduate course in Emergency Medicine has been started to meet the requirements. Although the concept is 25 years old in developed countries but our institute will be the first to start such course in India. The need of such speciality has also been recognised by the Medical Council of India. The objective is to create an integrated emergency care across the State by providing standard protocol care of management. This will gradually percolate and will result in reduction of mortality as well as morbidity. Inter linking between all the four phases of chains of survivor is essential to meet the objectives.

Duration of Residency

The post graduation course offers M. D. in Emergency Medicine. It is three years residency programme but can be extended to four years in advance centres. Selection process is by CET as done for other postgraduate subjects and as per the affiliated University rules. Students undergo clinical rotation in second year of residency to various other branches.

Subjects studied by Emergency Physicians during Training

- Anesthesia
- Cardiology Critical Care
- Dermatology
- Emergency Medicine Services, Environmental Illness, Ethics
- General Medicine, General Surgery, Geriatrics
- Neurosciences
- Obstetrics/Gynecology, Ophthalmology, Orthopedics, Otolaryngology
- Pediatrics, Psychiatry
- Research, Resuscitation
- Toxicology, Trauma
- Urology
- Wound Management

Advantages of Training in Emergency Medicine

- Encompasses all types of medical and surgical problems in all age groups
- Provides "safety net" in the National Health Care System for patient access to unscheduled care
- Allows other specialists to concentrate on their areas of expertise and interest
- Allows effective screening of patients for hospital admission. Reducing admission rates to inpatient services
- Prompt evaluation of emergencies
- Completion of diagnostic workups in single visits
- Limiting need for inter hospital transfers
- Allowing coordination of care by other specialists for patients with multiple medical problems, reassurance and confidence
- Efficient utilization of health care system
- Provides core of specialists to staff emergency departments
- Ensures quality, depth, and uniformity of training for emergency care
- Allows ability and confidence in managing basic emergencies

The Mission is to provide prompt, effective, timely treatment to all the patients in emergency. It has been expected that the medical teaching faculties will rise to the new demand, cooperate and fulfil the need of the State to serve the mankind.

Conclusion

Emergency Medicine as an emerging new branch in patient care will make a distinct bench mark. The 21st century has changed the life style, disease pattern and its management. Every life is precious and should not get lost or disabled for the sake of not having the right kind of treatment, at right time, at right place. Emergency Medicine is trying to fulfill this mission.

'The residency is a period of unbelievable professional growth and development, and with good fortune, may even be accompanied by comparable logarithmic personal enlargement. The resident should make a knowing and informed commitment to be a physician to take care of patients with compassion, justice, honor, dignity and devotion.

- Solomon Papper

Pharmacovigilance - An Overview

*Chetna Desai**, Prakruti Patel*, Anuradha Gandhi**, Mira Desai***, RK Dikshit*****

ABSTRACT

Pharmacovigilance is the science relating to the detection, assessment, understanding and prevention of adverse effects of medicines. Adverse drug reactions (ADRs) are responsible for 3 -7% of hospital admissions and are 4th to 6th leading cause of death. ADR monitoring is an important component of pharmacovigilance. India is in the process of developing its own pharmacovigilance system since 1986. The WHO-sponsored National Pharmacovigilance Program for India initiated by Central Drug Standard Control Organization (CDSCO) was made operational in 2005. Department of Pharmacology was designated as one of the 25 Peripheral Centers in this program. Since its inception it has submitted 1487 ADR reports. These were reported by the clinicians at Civil Hospital Ahmedabad and private practitioners. 309 (20.78%) of these were serious. Common causal drug groups were antimicrobials, antiretrovirals, antidepressants, antiepileptic drugs, antihypertensives and corticosteroids. A wide array of known, rare and interesting ADR like Immune Reconstitutive Inflammation Syndrome (IRIS) due to anti-retroviral therapy, convulsions due to fluconazole, disseminated intravascular coagulation due to piperacilin and tazobactam, hypoglycemia due to ciprofloxacin, atorvastatin induced pancreatitis and central serous retinopathy due to prednisolone were reported. Efforts are also being made to improve awareness about ADR reporting among prescribers through scientific meetings, newsletters and personal communications and to spread the awareness to other health professionals like nurses and pharmacists.

Introduction

Pharmacovigilance is the science relating to the detection, assessment, understanding and prevention of adverse effects of medicines.[1] It is an important and integral part of clinical research and therapeutics. An adverse drug reaction (ADR) is a noxious and unintended effect of a drug that occurs at doses used for therapeutics. A number of studies conducted throughout the world have demonstrated that ADR significantly decrease the quality of life, increase hospitalization, prolong hospital stay and increase mortality. A study by Lazarou in 1998 described ADR to be the 4th to 6th largest cause of death in the USA and that ADRs are estimated to cause 3-7% of all hospital admissions.[2] More than half of these ADRs are not recognized by the physicians on admission and may be responsible for death of 15 of 1000 patients admitted.[3] Furthermore, the financial burden of ADR to the healthcare system is huge.

* Assistant Professor
** Associate Professor
*** Professor
**** Professor & Head, Pharmacology
B. J. Medical College, Ahmedabad.

The need for Pharmacovigilance

Regulations for drug approvals process require and ensure early detection of ADR from clinical trials and post marketing surveillance studies by the pharmaceutical companies. However, the life of drug and its extensive use goes much beyond the drug approval. The real challenge is ensuring vigilance for ADR when the drug is prescribed to a large population in an uncontrolled manner. Not only is the incidence of ADR increased, but some rare or less frequent ADRs are detected then. However these often go undetected and if detected, they are not reported. Valuable information that could help better patient management is therefore lost and not shared among the health professionals. Patients frequently use prescription-only medicines (POM) as over-the-counter (OTC) drugs for self-medication thereby putting them at a greater risk of ADRs. Until some years ago, safety assessments of drugs were based on experiences derived from their long term use in the western markets. India did not have a pharmacovigilance system of its own. In recent years, however, the lag time between the drug appearing the western market and its

subsequent availability in India has decreased considerably. Long-term safety data is no longer available. Further, Indian drug companies have increased their capacity to develop new drugs through their own research initiatives.[4] These factors have emphasized the importance of developing our own pharmacovigilance systems.

The Indian Scenario

In spite of these requirements pharmacovigilance is still in its infancy in India, unlike in the West where it has advanced with rapid strides. A formal adverse drug reaction (ADR) monitoring system consisting of 12 regional centers, each covering a population of 50 million, was proposed for India in 1986.[5] In 1997, India joined the World Health Organization (WHO) Adverse Drug Reaction Monitoring Programme based in Uppsala, Sweden. Three centers for ADR monitoring were identified, mainly based in teaching hospitals: a National Pharmacovigilance Centre located in the All India Institute of Medical Sciences, New Delhi and two WHO special centers in Mumbai (KEM Hospital) and Aligarh (JLN Hospital, Aligarh Muslim University). The major role of these centers was to monitor ADRs to medicines marketed in India and report them to the Drugs regulatory Authority of India. The WHO-sponsored and World Bank-funded National Pharmacovigilance Program for India was made operational in 2005.[5] The Central Drug Standard Control Organization (CDSCO), initiated a nationwide pharmacovigilance program under the aegis of Directorate General of Health Services (DGHS), Ministry of Health and Family Welfare, Government of India. A nationwide network with 25 peripheral centers, 5 regional centers, and 2 zonal centers was established, in a hierarchical fashion, with predefined tasks and responsibilities allocated at each level.[7] Given this background of pharmacovigilance in India to date, nearly two decades later from its origin in 1986, things have definitely changed for the better albeit at a very slow pace. The Regulatory Authority for India have implemented the Schedule Y and made reporting of all serious adverse events (SAEs) including suspected unexpected serious adverse reactions (SUSARS) from clinical trials mandatory.[8]

However, much needs to be achieved in the culture of spontaneous reporting by health professionals. Research on ADRs in India is lacking. Some teaching hospitals in India undertake Pharmacovigilance as part of postgraduate thesis, but this is not enough. Moreover the information so gained is shared within closed forums and conferences but not with the regulatory authorities, the prescriber community or relevant pharmaceutical manufacturer. The reporting forms used by various people engaged in pharmacovigilance work differ in format and content and till late there was no uniform reporting system available throughout the country. In this context the ADR Reporting Form devised by the CDSCO meets this requirement. It is user friendly, takes a few minutes to fill up, addresses all the important data required to report and evaluate an adverse drug reaction.It is freely accessible from <http://cdsco.nic.in/html/pharmaco.html%209>.[9]

Pharmacovigilance at Department of Pharmacology, B. J. Medical College, Ahmedabad

The Beginning

Against this national scene, the Department of Pharmacology, B. J. Medical College, Ahmedabad had initiated pharmacovigilance activities since 1992. Monitoring of adverse drug reaction in public and private hospitals in Ahmedabad was undertaken during the years 1992-2000. Some case reports and review articles in scientific journals were published on this subject.[11-15] Hence the concept of pharmacovigilance and ADR reporting was disseminated to the prescribers since then, albeit in an unorganized, exploratory and sporadic manner.

The Journey

It was in May 2005 that it was designated as one of the 25 Peripheral Pharmacovigilance Centers all over India, being one of the five centers in western India and one of the two centers in Gujarat. The tasks envisaged for the peripheral centers included collecting and collating at least 30 adverse drug reaction notifications every month; which were then forwarded to the respective Regional Center. The Center was also required to carry out special projects

on drug safety on request of the CDSCO, carry out causality analysis of all the ADR on a monthly basis and maintain a log of all ADR forms and notifications.[20] Inculcating and fostering a reporting culture among the health professionals was and still is a challenging task. Acknowledging the contributions and cooperation of the participating clinicians, providing relevant feedback, organizing training, and other scientific programs related to Pharmacovigilance were the other tasks to be undertaken by the center.

Practical problems were realized during the process, for example there was an apparent lack of time and motivation among prescribers to report ADRs voluntarily. The outpatient departments are usually too crowded to offer any time and convenience for the clinicians to notify and report ADR. These problems were partly offset by the persevering postgraduates and the selected faculty who monitored adverse drug reaction reporting by visiting the outdoor and wards personally. We thus, had to proceed gradually but surely to an environment of strengthened trust, active participation and advocacy. To begin with, interested and motivated clinicians were identified, contacted personally, and through formal meetings. They were briefed about importance of pharmacovigilance and ADR reporting. The clinicians were encouraged to report ADRs by submitting the ADR reporting forms and notifying the ADR either telephonically or in person to the department.

Since there are multiple specialties and clinical units involved, individual staff members/residents were allotted the responsibility of individual unit/clinical department. This ensured that all ADR notifications were promptly attended. As a result of these concerted efforts, the department has been able to collect and collate significant and useful data on ADRs. The bright side of the experience was that the word about adverse drug reactions and pharmacovigilance had spread in the "prescriber" community. ADRs and ADR reporting were now being looked upon not with too much of awe, suspicion, and apprehension, but something that could be tackled and needed to be reported. It also helped build bridges between the age-old paradigms and compartments of clinical and non-clinical departments and develop meaningful interactions between them.

In this context a brief overview of the ADR reported during the past four years is mentioned for the benefit of the prescribers of this institution. These reports have been collated and analyzed to make certain meaningful conclusions that would be useful to the prescribers.

The Milestones

A database of the ADRs reported has been created. The information so obtained is classified based on age and gender of the patients, source of the ADR reports, causal groups of drugs, route of administration of suspected drugs, nature and clinical presentation of the adverse event, and the outcome of the adverse event. Most ADR notifications were received from the departments of Medicine, Dermatology, Psychiatry, T.B. and Chest diseases, Pediatrics, Ophthalmology, and Surgery. Some cases were reported by private practitioners too. Following are the salient features of the ADRs reported till date:

A total of 1487 cases of ADRs were reported in a period of 49 months; an average of 30.3 reports per month. A detailed analysis of these cases showed that ADRs were reported more frequently in males than in females (M:F = 1.4). Highest numbers of cases are reported in the age groups of 16-30 years (415) and 31-50 years (634). The common causal groups of drugs were antimicrobials (358), antiretroviral drugs (302), non steroidal anti inflammatory drugs (127), antitubercular drugs (127), antiepileptics (107), antipsychotics (104), antihypertensive (40), antidepressant (35), anticholinergics (35), antiplatelet and anticoagulant (18), diuretics (16), Over The Counter drugs (16) and corticosteroids (15). 61 ADR were due to drugs which could not be identified. The adverse events abated completely in 575 patients.

309 (20.78%) events were serious leading one or more of the following: death (13), life threatening events (40), requiring or prolonging hospitalization (203), induced disability (16) or required intervention to prevent permanent impairment/damage (69). The adverse events abated completely in 575 patients. Seven patients had recurrence after reintroduction of the drugs

The common adverse reactions observed were skin rashes (n=233), itching (n=118), other skin lesions (n=135), tingling (n=89), vomiting (n=88), diarrhea (n=74), S. J. Syndrome (n=56), nausea (n=52), tremors(n=49), giddiness (n=40), sedation (n=34), muscle dystonias (n=24) and others (670)

Fig.1 : Angioedema due to an unknown drug

Following are some of the unusual and interesting ADRs reported to this department.

- Cardiac arrhythmia leading to death after a single high dose of chloroquine.
- Psychosis after two days of isoniazid therapy.
- Two cases of Immune Reconstitutive Inflammation Syndome (IRIS) due to ART (anti-retroviral therapy).
- Convulsions due to single dose fluconazole.
- Disseminated Intravascular Coagulation (DIC) due to piperacilin + tazobactam.
- Hypoglycemia due to ciprofloxacin
- Atorvastatin induced pancreatitis
- Central serous retinopathy due to prednisolone
- S. J. Syndrome due to multivitamins
- Toxic epidermal necrolysis (TEN), S. J. Syndrome, dermatographia and angioedema due to unknown drugs.
- Amenorrhea due to stavudine+ lamivudine + nevirapine therapy.
- DRESS (Drug rash, Eosinophilia and Systemic Symptoms) syndrome due to diclofenac sodium.

Fig.2 : S. J. Syndrome due to an OTC drug

Causality assessment of the reports has been carried out using the WHO UMC criteria as well as the Naranjo's Scale. These scales are universally used for deciding if a suspected drug is responsible for an adverse drug reaction.

The department also carried out various activities to promote ADR reporting. Meetings were held with clinicians to train and sensitize them to spontaneous reporting. The Peripheral Center and its activities were publicized through newsletters of the local Medical Associations. Two issues of "Drug Watch", a newsletter that informed the readers about ADRs, pharmacovigilance and interesting ADRs reported to the department and worldwide, were published. These were widely distributed to prescribers at the Civil Hospital, Ahmedabad and the private practitioners, other institutions in Gujarat and elsewhere in the country. The website http://www.pharmacologybjmc.org was launched that informed about the pharmacovigilance and its related activities carried out by the department, contact details for spontaneous reporting, interesting cases reported every month, and other activities of the department. An International Workshop on ADR monitoring was organized that was well attended by participants from all over the country.

The Present

Currently the work continues at a sustained pace. The Peripheral Centre has provided an opportunity to pursue an important scientific cause in an organized manner given the backup from the National Pharmacovigilance Programme.[21] Slowly yet surely, we are observing the conversion of "believers" from "skeptics" among the prescribers about ADR reporting. Increasingly more of

academic and research work in the department is focused towards pharmacovigilance. It has increased our interaction with like-minded clinicians and other health personnel. The experience gained thus also transformed into a useful academic outcome, when the undergraduate students had their firsthand experience on ADR reporting as a part of their practical curriculum. The postgraduates too get a firsthand experience in interacting with the clinicians and other health personnel about issues related to pharmacovigilance. They have been trained not only in handling "signals," guiding the reporters, but have also learnt to segregate the reports and build up the database of reported ADR. Also they are able to assess the ADR reports for causality; an exercise that can be intriguing and confusing at times.

We thank the following for their contributions to the success of pharmacovigilance. Their interest and support goes a long way in sustaining this activity that is in the best interests of the academia and the clinicians alike. We look forward to their continuing support and to more joining us in this crusade for drug safety.

Department	Number of cases reported
Medicine	632
Dermatology	350
Psychiatry	162
Private Practitioners	100
TB and Chest disease	94
Ophthalmology	47
Pediatrics	37
Others (Surgery, Orthopedics	65

The Future

A robust and sustained pharmacovigilance system is the need of the day. While the initiatives have been taken, much needs to be done. In this context it is heartening to note that the Drugs Controller General of India is trying to build up a good regulatory system for India and has even proposed to create a Pharmacovigilance Cell in each of the 240 medical colleges in India, where adverse events can be reported.[23] Currently the activities related to pharmacovigilance are largely confined to this institution. We aim to encourage a larger number of prescribers and other healthcare professionals including pharmacists, nurses and heath care workers to report ADR, to involve professional organizations of health care providers in educating their members about the importance and methods of pharmacovigilance. It is also important to allay the concerns of the clinician about the medico legal implications of reporting ADR. Providing information about ADR reports, feedback of causality assessment and acknowledging the contributions of the notifiers will strengthen the system and ensure proactive participation.

Useful information for those who wish to notify or report Suspected Adverse Drug Reactions :

What to Report?

- All suspected drug related adverse events (including the known, insignificant and common ones), including those caused by herbal, traditional or alternative remedies.
- All suspected drug interactions.
- Serious adverse drug reactions should be reported as soon as possible (within 24 hours)

Who can report?

- Any health care professional (doctors including dentists, nurses and pharmacists)

How to report?

- Telephonically
- In person to any staff or resident in Department of Pharmacology
- Email: pharmabjmc@yahoo.com
- The ADE Reporting form is available in the department or can be downloaded from http://cdsco.nic.in/html/pharmaco.html

Adverse drug reactions (ADRs) are responsible for 3 -7% of hospital admissions and are 4th to 6th leading cause of death. India is in the process of developing its own pharmacovigilance system. The initiatives have been taken, much needs to be done. A robust and sustained pharmacovigilance system is the need of the day.

References

1. WHO Definition of Pharmacovigilance. 2002.
2. Lazarou J, Pomeranz BH, Corey PN. Incidence of adverse drug reactions in hospitalized patients: A meta-analysis of prospective studies. JAMA 1998;279:1200-5.
3. Gandhi TK, Weingart SN, Borus J, *et al.* Adverse drug events in ambulatory care. N Engl J Med 2003;348:1556-64.
4. Nair MD. Pharmacovigilance: The need for a formal system in India. Available from: http://www.pharmabiz.com.
5. Kulkarni RD. Reporting system for rare side effects of non-narcotic analgesics in India: Problems and opportunities. Med Toxicol 1986;1:110-3.
6. Protocol for National Pharmacovigilance Program. CDSCO, Ministry of Health and Family Welfare, Government of India. November 2004.
7. World Health Organization (WHO). The Importance on Pharmacovigilance. Safety Monitoring on Medicinal Products. Geneva (Switzerland): Office of Publications, World Health Organization; 2002.
8. Moin Don, Clinical trials and safety reporting in clinical trials. Pharmabiz.com accessed from http://www.pharmabiz.com/article/detnews.asp?articleid=29606&sectionid=46
9. Available on <http://cdsco.nic.in/html/ADR_form_PDF_file.pdf>
10. Protocol for National Pharmacovigilance Programme. CDSCO, Ministry of Health and Family Welfare, Government of India. November 2004. Available from:http://www.cdsco.nic.in/html/Pharmacovigilance%20Protocol%20.pdf
11. Desai CK, Desai BM, Shah MH, Girdhar AO, Shah UH Sulphonamide induced Stevens Johnson syndrome with severe ocular manifestations.. IJCP1993; 3(11): 46.
12. Desai MK, Girdhar AO, Shah UH. Nalidixic acid induced blood dyscrasais. IJCP 1993. 4(5):72.
13. Desai MK, Bhatt MD, Girdhar AO, Shah KV, Shah UH. Manifestations of adverse drug reaction due to anti tuberculous drug therapy. IJCP 1994; 5(1): 57-58.
14. Desai CK, Girdhar AO, Shah UH, Dani RD. Severe adverse reaction in enteral contrast studies. Indian Practitioner 1995;XLVIII (10): 975-977
15. Desai MK, Girdhar AO, Shah UH Adverse drug reaction monitoring programme - an approach to improvement of patient care.. Indian Practitioner 1997; 50(6): 507-509.
16. Desai Chetna, Shah U.H. Adverse drug reactions - a clinician's challenge — Gujarat Medical Journal, Dec 1997, Vol 54: No 2/97.
17. Desai CK, Desai KJ and Shah UH. Ofloxacin induced allergic vasculitis. JAPI 1999; 47 (3): 349.
18. Desai CK, Shah UH. An unintended rechallenge confirms an adverse drug reaction. IJCP July 2002.Vol 13, No. 2: 18-19.
19. Shah A, Desai CK and Shah UH. Prescribing newer anti ulcer drugs: How careful one should be? The Indian Practitioner 2001; 54(10): 733-35.
20. National Pharmacovigilance protocol accessed from cdsco.nic.in/html/Pharmacovigilance%20Protocol%20.pdf
21. Dikshit RK, Desai C, Desai MK. Pleasures and pains of running a pharmacovigilance center. Indian J Pharmacol [serial online] 2008
22. Viveka Roychowdhury. DCGI to unveil CDSCO's Vision 2020 at 60th IPC Express Pharma accessed from http://www.expresspharmaonline.com/20080930/market07.shtml

Anesthetic Management of Facial Injury by Large Sharp Metal Rod

Ranadhir Mitra, J.C. Makwana**, Bhavna Raval***, Indu Chadha****, B. J. Shah******

ABSTRACT

A 35 year old female was admitted to the casualty with an embedded sharp large metallic rod across face with inability to open mouth beyond one finger. The patient was successfully managed in spite of difficult airway and the rod was removed under general anesthesia.

Key words: Maxillofacial trauma, difficult intubation, External carotid ligation

Introduction

Penetrating maxillofacial trauma with in-situ foreign body presents a spectrum of problems for the anesthesiologist with regard to patient positioning, airway control, intra-operative hemodynamic and post-operative airway patency.

We report a successful management of a case of penetrating maxillofacial trauma in which a 35 year old woman with a large sharp metallic rod passing through mid-face. The rod resulted into difficulty in laryngoscopy and intubation due to restricted mouth opening. The case was approached with conventional method of intubation after head and foreign body stabilization. An uneventful intra and postoperative course was ensured by adequate measures to reduce airway edema.

Case Report

A 35 year old female was assaulted by her schizophrenic husband with a sharp, large heavy metallic rod, passing from left side to right side of the face below the eyes as shown in Fig.1.

Fig 1: Embedded metal rod with restricted mouth opening.

* Resident
** Assistant Professor
*** Associate Professor
**** Professor and Head
***** Dean and Professor, Anesthesiology
B. J. Medical College, Ahmedabad.

There was no history of loss of consciousness, convulsions, loss of vision, vomiting, bleeding from ear, nose and mouth. CT brain and skull showed right temporomandibular joint dislocation and hemo-sinuses, with normal brain. Other investigations were within normal limits. On examination she was conscious, oriented but unable to speak with the large metallic rod in-situ. Her vitals were within normal limits. Mouth opening was only one finger with restricted neck movements. After taking an informed consent, the patient was taken to the operation theatre and two large I.V. lines were secured, ECG, SPO_2, non-invasive BP monitors were applied. The patient was given supine position with supports to the rod with rings for stable position of head(Fig: 2).

Fig 2 : Intubation with in-situ metal rod

The difficult intubation cart and cross matched blood was kept ready. Glycopyrolate 0.2mg i.v and ondansetron 4mg i.v. were adminitstered as premedication. Pre-oxygenation done with 100% oxygen for 3 minutes. Anesthesia was induced with propofol 100mg i.v. followed by check ventilation and succinylcholine 100mg i.v. Following intermittent positive pressure ventilation, conventional laryngoscopy was attempted and the patient was

successfully intubated. Patient was maintained with O_2, N_2O, isoflurane and with non-depolarizing muscle relaxant vecuronium bromide. The vitals were within normal limits during operation. The surgeon performed external carotid artery ligation prior to rod removal. The reversal and extubation was uneventful and the vitals were stable in post operative period. The patient was discharged after a period of 15 days.

Discussion

The present case was an unusual with anticipated complications.[1,2] Preoperatively there were chances of difficult intubation because of restricted mouth opening and soft tissue edema. Further, laryngoscopy was difficult due to locking action of rod, fracture zygomatic arch and dislocation of temporomandibular joint. Hence difficult intubation cart was kept ready and ENT surgeon as stand by for surgical intervention. Intra operatively massive bleeding was anticipated so external carotid ligation was done and to prevent injury to brain the rod was removed in the same direction. Post operative airway obstruction and bleeding was expected. However, the rod was removed successfully without any complication. I.V. steroids were given to prevent soft tissue edema.

Conclusion

Maxillofacial trauma may result into serious disruption of the soft tissue, bony and cartilaginous components of the upper airway. A thorough preoperative evaluation, experienced team of anesthesiologist and good communication with surgeons result into safe, successful airway management and operative outcome.

References

1. Regev E, Constantine S, Pomeranz S et al. Penetrating craniocerebral injury caused by metal rod; an unusual case report. Injury 1990 J 21:414-15.

2. Cartotto R, Zucker RM. An unusual facial injury highlighting the basis of diagnosis in maxillofacial trauma; a case report. Can J. Surg.1983; 31:349-52.

Transurethral Extraction of Seminal Vesicle Stone

Goyal V, Shrenik Shah ***, Ketan Desai****, Ketan Shukla **, Sachar R *, A Nath**

Introduction

The seminal vesicles are a pair of simple tubular glands posterior inferior to the urinary bladder in males. The excretory duct of seminal vesicle opens into the vas deferens as it enters the prostate gland. Although primary seminal vesicle stone is rare, it is a potential cause of chronic pelvic pain that is difficult to diagnose. Surgical approaches to the seminal vesicles stone removal include the perineal, transvesical, paravesical, retrovesical, transcoccygeal, laparoscopic and endoscopic (transurethral) route. This is a very rare variety described very sparsely in medical literature. We report a case of seminal vesicle stone treated with minimal invasive method and excellent outcome.

Key words: Seminal vesicles, Seminal vesicle stone, Transurethral approach

Case report

57 years old male patient came with complains of pus discharge from previous left Orchidectomy (low) site with history of voiding difficulty in the form of poor stream and straining for the last 4 months. Patient underwent Visual Internal Urethrotomy (VIU) and left orchidectomy 10 months back. The histopathology report of the left testis was acute on chronic epididymorchitis. On examination, there was a sinus on the left scrotum with serous discharge. On per rectal examination, the left lobe of the prostate was stony hard in consistency, there was no obliteration of the median or the lateral sulcus, it was non tender and the overlying mucosa was mobile.

On further evaluation, the PSA was 2.3 ng/ml, X-ray KUB showed a radio opaque shadow in the pelvis showing prostatic urethral calculus (Fig.1). Since the patient was having stricture urethra a retrograde urethrogram (RGU) was done which showed incomplete stricture in the proximal bulbar urethra with the radio opaque shadow lying on its left side (Fig.2). On urethroscopy there was an incomplete 0.5 cm bulbar urethral stricture for which VIU was done. On cystoscopy, stone was visible in the left ejaculatory duct opening (Fig.3). Transurethral resection of the ejaculatory duct was done using cutting current and approximately 2 cm size stone was extracted from the seminal vesicle, pushed into the bladder and burred using pneumatic lithotripter. The fragments were retrieved per urethra. The scrotal sinus tract was excised.

Fig.1: Plain X-ray pelvis showing an abnormal shadow

Fig.2 : Retrograde urethrogram showing the abnormal shadow lying on left side with incomplete stricture proximal bulbar urethra.

Discussion

Seminal vesicle stones are extremely rare, and few cases have been reported. Treatment requires removal of the stone, generally through an open vesiculectomy. To our knowledge, very few cases have been operated by endoscopic approach.[1,2,3] Our result is encouraging for treatment of such pathologic conditions of the seminal

* Resident
** Assistant Professor
*** Associate Professor
**** Professor & Head, Urology
B.J. Medical College, Ahmedabad.

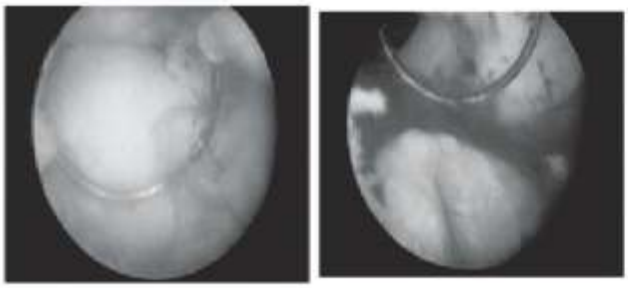


Fig.3 : Intraoperative endoscopic view of the stone in the seminal vesicle

vesicles, which will ensure preserving the organ with all the advantages of minimally invasion surgery.

References

1. Scott P. Cuda, Timothy C. Brand, Gregory P. Thibault, Richard S. Stack. Journal of Endourology Case Report: Endoscopic Laser Lithotripsy of Seminal-Vesicle Stones, November 2006, 20(11): 916-18.

2. Y. Özgök, M. Kilciler, E. Aydur, M. Saglam, H. Cem Irkilata, D. Erduran. Endoscopic seminal vesicle stone removal. Urology, 65,(3), 591.

3. Li YK. Diagnosis and management of large seminal vesicle stones. Br J Urol. 1991; 68(3):322-3.

15th October "World Hand Washing Day"

Bipin Amin, Bela Shah***

World Hand Washing Day is a campaign to motivate and mobilize millions around the world to wash their hands with soap. It took place for the first time on 15th October, 2008, the International year of sanitation.

Activities Undertaken

- A mass media campaign was held in India with the support of central and state ministers, celebrities and school teachers to reach out to public and about 100 million school children.
- Posters, teacher training module on hand washing, pamphlet with pledge for students, TV spots, radio jingles and song on the five steps for correct hand washing was developed. Several activities in schools including children pledging towards hygiene, hand washing games and washing hands in a giant waterfall.

Importance

Hand washing with soap is the single most effective and inexpensive way to prevent diarrhea and acute respiratory infections. Diarrhea and pneumonia, together account for almost 3.5 million children deaths annually. Studies have shown that washing hands with soap can reduce deaths from diarrhea by almost 50 percent and deaths from acute respiratory infections by 25 percent. The diseases that can be prevented in the community by hand washing includes hepatitis, shigellosis, common cold, influenza, giardiasis, conjunctivitis, helminthiasis.

Definitions

Hand washing for **hand hygiene** is the act of cleansing the hands with water or another liquid, with the use of soap, for the purpose of removing soil, dirt, and/or microorganisms. Hand Hygiene a general term that applies to hand washing, antiseptic hand wash, antiseptic hand rub or surgical hand antisepsis. Hand washing includes washing hands with plain (non-antimicrobial) soap and water.

Medical Hand Washing

The purpose of hand washing in the health care setting is to remove pathogenic microorganisms and avoid transmitting them. A study showed that proper hand washing in simple procedures can decrease the rate of catheter related bloodstream infections by 66 percent. Pathogens are most often transmitted from patient to patient from the hands of healthcare workers. Cleaning the hands before and after patient contact is one of the most important measures for preventing the spread of microorganisms in healthcare settings. Hands should be washed before the patient contact, donning gloves when inserting a CVC, urinary catheters, peripheral vascular catheters, or other invasive devices that don't require surgery and after contact with a patient's skin, body fluids or excretions, non intact skin, wound dressings, removing gloves.

Source of bacteria in the hands of Healthcare worker is by performing simple tasks like:

- pulling patients up in bed
- taking a blood pressure or pulse
- touching a patient's hand
- rolling patients over in bed
- touching the patient's gown or bed sheets
- touching equipment like bedside rails, over bed tables, IV pumps

Barriers to hand washing

- heavy workloads (too busy)
- sinks located far away
- skin irritation caused by frequent exposure to soap and water
- hands don't look dirty
- hand washing takes too long

Prevention is primary intervention for hand associated infections. Hand Hygiene is the SINGLE most important practice to prevent nosocomial infections. There are many limiting factor but most important is ATTITUDE of health care worker.

* Associate Professor, Medicine

** Associate Professor, Pediatrics

B. J. Medical College, Ahmedabad

Computer Vision Syndrome

*Dipak C Mehta **, Dipali Parmar**

Since the computers have become our best buddy at home and offices, a new ocular condition has emerged known as 'Computer Vision Syndrome' (CVS). Nearly 100 millions people have been affected by CVS today. It is a specific ocular disorder in people who spend prolonged time on computer or laptop characterized by eye strain and other related symptoms.

Sign and symptoms

- Eye strain
- Blurred near or distant vision
- Difficulty in focusing objects after working long on computer
- Rapid fatigue on reading
- Tired, dry, irritated eyes
- Diplopia (double vision)
- Pain in and around eye
- Burning, redness, sand like feeling underneath eyelids

Predisposing factors

- Common in 30-40yrs. of age group, but can occur in children or more than 40yrs. of age group.
- Spending more than 2 hours continuously on computers daily.
- Person having refractive errors.

Reasons for CVS

- Due to decreased blinking rate:

  Normal blinking is required for even distribution of tear film so that eye can function smoothly due to lubrication of ocular surface. Normal blinking rate is 16-20/minute, which is reduced to 6-8/ minute due to starring at screen.

- Computer screen differs from natural objects by:
  - Having glowing surface with insufficient contrast and precise borders.
  - Images on screen are made up of countless shimmering pixels; eyes work very hard to sustain focus on such images.
  - Higher reflection on computer screen.
- Musculoskeletal symptoms due to awkward postures in front of computer screen:
  - Improper height of table or chair
  - Improper distance between eye and screen.

Tips to overcome computer vision syndrome

- Keep your computer screen in such a way that the centre of the screen is 4-8 inches below your level and adjust the distance of 20-28 inches.
- Use a document holder placed next to your computer screen. It should be close enough to avoid swinging the head back and forth or constantly change the eye focus.
- Maintain the lighting to reduce the glare and harsh reflections. Glare filters over the computer screen can also help.
- Use computer glasses with appropriate lens type and antiglare coating while working with the computers
- Avoid seating near an air vent and direct the air vent away from the eyes.
- Low humidity or fumes aggravate a dry eye condition.
- Blink more frequently with the symptoms of dry or irritated eyes.
- Take frequent breaks during the computer work. Follow the 20-20-20 rule. This simply means every 20 minutes, look away beyond 20 feet and blink 20 times.
- Use artificial tears as recommended by the doctor to lubricate the eyes.

* Assistant Professor
** Professor and Director
M & J Institute of Ophthalmology, C. V. Hospital, Ahmedabad.

16th October 'World Anaesthesia Day'

*Smita Engineer *, Indu Chadha **, Bharat Shah ****

October 16th 1846 - First Public Demonstration of Surgical Anaesthesia

No discovery ever made in medicines has proved more beneficial to the human race than the discovery of Anaesthesia. This has not only prevented the immense suffering during surgical operations, but also the whole structure of modern medicine has drawn strength from its success. The era of surgical anaesthesia did not begin until approximately a century and a half ago. In 1846, American dentist, Dr. Willam Thomas Green Morton made the first public demonstration of the administration of ether anaesthesia, in Massachusetts General Hospital, Boston.[1, 2]

Fig.1: Painting of first public demonstration of surgical anaesthesia at Massachusetts General Hospital, Boston

The patient named Gilbert Abbott was operated for removal of a tumour beneath the left lower jaw. Surgery was performed by Dr. John Collins Warren. There were no signs or reports of pain in the patient, yet he was alive and breathing. When the operation was completed, Dr. Warren turned to astonishing audience and made the statement "Gentlemen this is no humbug." Dr. Henry, an eminent surgeon who attended the demonstration, remarked "I have seen something today that will go around the world." The news of the successful demonstration spread rapidly and five months latter on 22nd March 1847 it was used in India at Calcutta.

After 150 years in 1996, 16th October has been recognized as 'World Anaesthesia day'. On 27th December 1996 the Indian post department issued the stamp depicting Morton administering ether to Abbott with Dr. Warren and Dr. Bigelow in the background.

Fig. 2: Stamp issued by Indian post department on 27th December 1996

Dr. William Morton tried to patent the use of ether but failed. The citizens of Boston erected a monument over the grave of Dr. Morton with the following inscription,

William TG Morton 'Inventor and Revealers of Inhalation Anaesthesia:

Before whom, in All Time, Surgery was Agony;

By Whom, Pain in Surgery was Averted and Annulled;

Since Whom, Science has Control of Pain."[2]

References

1. R. S. Atkinson, J. Alfred Lee. A synopsis of anaesthesia, 10th edition, 6, 27
2. Tej. K. Kaul. "Happy Birthday" - Anaesthesia. J Anaesth Clin Pharmacol 2006; 22(4) 333-34.

* Associate Professor
** Professor and Head
*** Dean and Professor, Anaesthesia
B J Medical College, Ahmedabad.

Body Donation - A Social Obligation

CA Pensi, HR Jadav ***

Donation is the tradition of Indian culture. Our ancestors used to donate metals, cereals, land and clothes. With changing times, the theme has been changed and donation of blood, eyes, kidney and even body after death has been started. Dead body donation is a newer concept in the society. Although the history of dead body donation goes back to the ancient time of rushi *Dadhichi*, who donated his bones to *Indra*, who made weapons to fight against devils. Similarly, weapon of knowledge, gathered by dissecting human body is used to fight against deadly diseases.

To study the intricate details of human body, dissection is necessary and this has led to the origin of a discipline, known as Anatomy. The ancient anatomists like *Gray*, used to dig out buried dead body from the grave yard at night, to study the structures. Initially, the practice of embalming and body donation in Gujarat was regulated by Bombay Anatomy Act. Under this Act, Anatomy department was permitted to claim the unclaimed bodies for embalming and dissection. Currently, as autopsy is compulsory for the unclaimed bodies, the major source of dead bodies received at the department is in the form of donation. While receiving the dead body, a death certificate along with the cause of death of the deceased is necessary. The body should be intact without any wound, lacerations or incisions and the time duration since death should not be more than 6 - 8 hours. The body is then preserved by injecting embalming fluid, consisting of formalin, spirit, glycerine and water. Nearly 10 litres of fluid is injected through artery. Such a body can be preserved for a longer time. Apart from teaching of undergraduate and postgraduate students, clinicians from various faculties like E.N.T., Orthopaedics, Neurosurgery, Plastic surgery and Anaesthesia also use the cadavers for their research projects, workshops and seminars. Once the dissection is complete, the remains of the body is cremated with due respect in crematorium.

People from every corner of Gujarat have expressed their support in the form of SANKALP PATRA, to donate their body posthumously for medical students. This shows the increased awareness regarding dead body donation in the society. What a noble gesture to become helpful to the society even after death! Anatomy department always appreciates such a gesture for a noble cause. The department always receives the dead body donation with high regards and honours in presence of Dean, staff members and students (Fig.1).

Fig.1 : Receiving dead body with full honour at the department

The department is thankful to those departed souls, who have donated their bodies for study purpose. The social organisations like Sadkarya Sewa Samaj, Lions club, Rotary club, Senior citizens club and individuals like shree Farsubhai Kakkad, Babubhai Patwa and all those who have contributed a lot in this field. Salute to all these great people!

DONATE BLOOD

DONATE EYE

DONATE BODY

* Professor and Head

** Associate Professor, Anatomy

B. J. Medical College, Ahmedabad.

Students' Activities and Achievements

- A two days training cum workshop on **' Universal Precautions for Health Care Providers'** was organized under the banner of National Services Scheme of B. J. Medial College, Ahmedabad on 25th and 26th of March 2009. Approximately 95 N.S.S. volunteers and medical students participated in the workshop.

- Table Tennis tournament was organized between 7th to 11th September with a new concept of team event. The participants got divided into two teams - The Phoenix and The Conquerors. The winners were Dr Snehal Patel(singles), Rushikesh Shah, Dhiraj Kandre(doubles)and Rushikesh Shah, Dhiraj Kandre & Snehal Patel (The Phoenix team)

- **National Nutrition Week** along with Quiz was jointly organized between 1st to 7th September by Department of Pediatrics and Nutrition, Civil Hospital, Ahmedabad. The first prize was awarded to Dr. Daivesh Shah and second position to Dr Kuldeep Mori.

- Badminton tournament was organized between 16th to 18th September by Rushikesh Shah, Rahul Sanghavi and Nandish Thakkar for students of B.J. Medical College and NHL Medical College. The winners are Vaibhav Nadkarni (men's singles), Vaibhav Nadkarni and Parth Patel (men's doubles), Vaibhav Nadkarni and Avi Singhal (mixed doubles), Dharmista (women's singles), Sneha Patel and Avi Singhal (women's doubles).

- **'Joyfest'**, a sociocultural event was organized for the underprivileged children on 30th September 2009. The children showed extraordinary talent and the event was well attended by students from different institutions of the campus.

- Dr. Vishal H. Parmar has been awarded a certificate for successfully completing the short term studentship by ICMR for a project on 'Ventilator associated pneumonia'. The project compared the incidence and risk factors of pneumonia in patients with or without ventilator admitted in Intensive care unit of Civil Hospital, Ahmedabad.

Medical education is not just a program for building knowledge and skills in its recipients... it is also an experience which creates attitudes and expectations.

Abraham Flexner 1914

Instructions to Contributors

Manuscripts

- Manuscript must be submitted in two hard copies and CD (MS word 2007 format) along with the mandatory submission form signed by the authors regarding the originality of the article and copyright. A copy of the same may be mailed at editorsbjkines@gmail.com.
- The text must be printed in double spaced, on one side of the A4 size paper with sufficient margin, using century font, size 12.
- Text should have title page, with full name of the author(s), designation and affiliations. The corresponding author's address, email id and telephone number should be mentioned.
- P.G. students should submit their articles through the Professor and Head of the department.
- A structured abstract for the research articles and unstructured for the review article, not exceeding 200 words should be included.
- All full length research articles should follow IMRAD pattern. The length for research article should not exceed 3200 words, references 25, and tables/figures 4.
- The length for short communication/case report should not exceed 1200 words, references 10, and tables/ figures 2.
- The references should follow Vancouver style and be cited in the text by superscripted number and numbered in the order in which they appear.
- Table(s) figures referred in the text should be typed on separate page, be numbered in roman numerical with a brief title.
- Figures/ Photographs should be glossy, clear and submitted separately on CD with JPEG format. Each of them should be numbered, referred in the text and legends should be typed on separate page. On the back of each print mention the figure number, name of the article and authors. Maximum two photographs can be submitted with each article. Colour photographs will be printed at the author's expense.

Copyright

Submission of the manuscript implies that the work described has not been published or not under consideration for publication elsewhere.

Disclaimer

The opinions / views / claims expressed are those of the authors and contributors, and do not necessarily reflect those of the institution, editors and publishers. The editors and publishers can not accept any responsibility for any errors, omission or opinions expressed by authors. The magazine is edited and published under the directions of the editorial committee who reserve the right to reject any material without any explanations. All communications should be address to the Editor.

Other Information

Scientific activities should include condense information on the conferences and workshops organized by department, details of research project, guest lectures by faculty, poster/ paper presentation, name and reference of the published paper(s). However, it should not exceed more than one page.

Address for submitting the manuscripts:

Dr. Mira K. Desai
Professor of Pharmacology,
Department of Pharmacology,
B. J. Medical College, Ahmedabad-380016.

Mandatory Submission Form

Title of the article : .....

.....

Specification: Case report/ Original article/ Review article/ Short communication

Key Words : ....., ..., ..., ...,

Copyright statement and authors responsibilities:

We hereby certify that,

1. The manuscript is original work/compilation work, without fabrication, plagiarism, or fraud;
2. The manuscript is not currently under consideration elsewhere and the research reported will not be submitted for publication elsewhere unless a final decision made by journal that the manuscript is not acceptable;
3. We have participated sufficiently in the intellectual content of this paper;
4. We have read the complete manuscript and take responsibility for the content and completeness of the final submitted manuscript and understand that if the manuscript or part of the manuscript is found to be faulty or fraudulent, we share responsibility;
5. If necessary we will cooperate fully in providing any data / information based on this manuscript.

Signature of each author in the same order as that of the manuscript:

Name : ..... Signature : ..... Date : .....

Name : ..... Signature : ..... Date : .....

Name : ..... Signature : ..... Date : .....

Name : ..... Signature : ..... Date : .....

Name : ..... Signature : ..... Date : .....

Name : ..... Signature : ..... Date : .....

Corresponding author :.....

Mailing address :.....

.....

Phone : ..... E-mail : .....

(Authors may use photocopy of this form)

"WALKFIT" ARTHRITIS CLINIC & TRAINING CENTRE
AHMEDABAD

DR. H. P. BHALODIA

Joint replacement surgeon
(Professor and Head of the unit, Civil Hospital & BJMC Ahmedabad)
In Addition to Civil Hospital Services he will now be available to
expert advice and care of all kind of joint replacement surgeries
including Knee, Hip, Elbow, Shoulder, Uni condyler
as well as revision Surgeries at

STERLING HOSPITAL

Behind Drive in Cinema, Thaltej, Ahmedabad - 380 052.
Time : 5:30 to 7:00 pm (WED, THU, FRI)
Phone : +91-79 (40011111) Fax : +91 (40011166)

SUKHMANI HOSPITAL

Dinesh Hall Lane, Near Kandoi Bhogilal Shop,
Behind Sales India, Ashram Road, Ahmedabad - 380 009.
Time : 5:30 to 7:00 (MON, TUE)
Phone : 079-26575151, 26577676, 26578080

Appointment Contact : 9327099818

Inauguration of MCQ lab by Hon'able Health Minister Shri Jay Narayana Vyas and dignitaries

The Launching of *BJKines*

Students and parents waiting at Central Admission Cell

'Oath taking ceremony' by new batch, August 2009

Condolence meeting – Untimely and sad demise of Dr. B. G. Gohil, Professor of Anatomy

'Swine flu awareness campaign' by Community Medicine department at urban health centre MALA

'Tree Plantation Programme' at the institute

'White coat ceremony', Students distributed Apron and books by B. J. Medical College Alumni Association

Carom Tournament

Badminton tournament

Posters by students at blood donation camp

Underprivileged children performing at 'JOYFEST', a Sociocultural event

UNIQUE ENTERPRISES

201-203, 2nd Floor, Sun Enclave, Opp. Jalaram Temple, Karelibaug, Vadodara - 390 018.
Telephone +91 265 - 2485431, +91 Fax 0265 - 2485432 E-mail : unique_kanti@yahoo.com

UE-A name to reckon servicing nation in field of health care products

Catering the field of :

Orthopedics,
Anesthesia,
Surgery,
ENT,
Gynecology,
Dental,
Ophthalmology,
Cardio-Vascular,
Neurosurgery,
Plastic Surgery

We represent companies like :

Johnson & Johnson (Ethicon, Endo-Ethicon & Gynecare Division)
Drager Medical,
Laryngeal Mask Co. (UK),
Bausch & Lomb Eyecare (I) Pvt. Ltd.,
Sharma Surgical & Engineering Pvt. Ltd.
Larsen & Tourbo Ltd.,
Tekno-Medical (Germany)
Abbott India Ltd,
Nobel Biocare (Sweeden) etc.
Kalelkar Surgical Pvt. Ltd.