



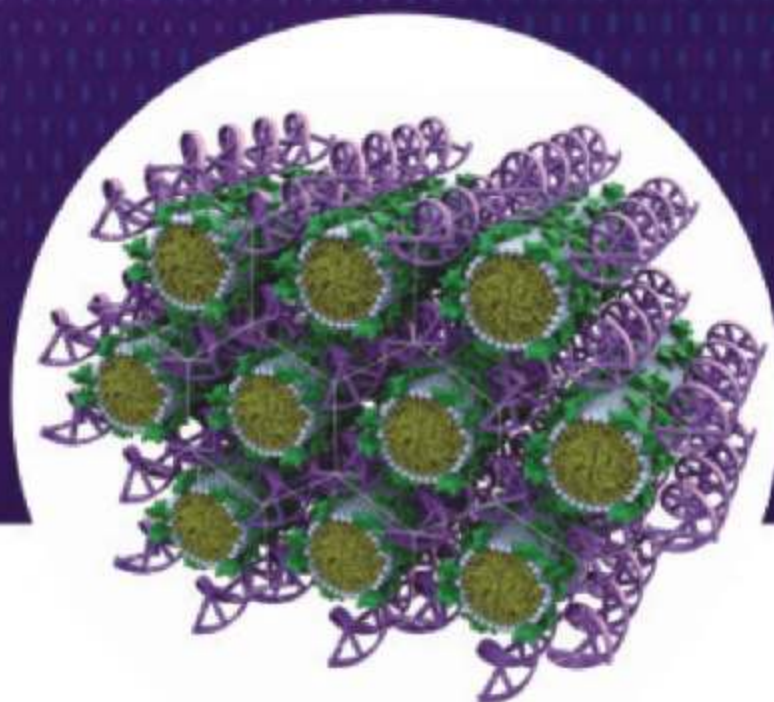
# *BJKines*

To Educate, Inform and Promote

Volume 1

No.1

June 2009



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

(Health & Family Welfare Department, Government of Gujarat)





# *BJKines*

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

## *Editorial Board*

### *Chairman*

Dr. Bharat J. Shah, Dean

B. J. MEDICAL COLLEGE

### *Co- chairman*

Dr. Asha N. Shah, Additional Dean

### *Editors*

Dr. Mira K. Desai

Dr. Bipin K. Amin

### *Members*

Dr. M. R. Desai  
Dr. R. K. Dikshit  
Dr. M. M. Vegad  
Dr. B. J. Shah  
Dr. B. H. Shah  
Dr. S. R. Engineer  
Dr. N. M. Bhatnagar  
Dr. A. V. Trivedi

### *Advisors*

Dr. H. L. Trivedi  
Dr. P. M. Shah  
Dr. M. M. Prabhakar  
Dr. R. K. Patel  
Dr. M. M. Anchalia  
Dr. B. D. Mankad  
Dr. D. C. Mehta  
Dr. H. P. Bhalodia

B. J. Medical College & Civil Hospital, Ahmedabad - 380016

Phone No. 079 - 22681024 / 22680074, Fax : 079 - 22683067

[www.bjmc.org](http://www.bjmc.org)

E-mail : [editorsbjkines@gmail.com](mailto:editorsbjkines@gmail.com)

ap00000/220422009



**-: MESSAGE :-**

An in-house magazine, generally, apart from being informative, also highlights the high spirits and achievements of the concerned institution/ organization. It also offers endless opportunities for inmates to contribute effectively in all spheres.

It gives me immense pleasure to note that '**B. J. Medical College**' is launching a magazine that will envelope the college as well as the affiliated institutions. I extend my warm wishes and greetings to this new interactive organ. I am sure the college will boldly rise to the challenges and achieve glory for the country.

I also take this opportunity to compliment the editorial team and students who have worked hard for the edition of this magazine.

  
(NARENDRA MODI)

To,  
**The Dean,**  
B.J. Medical College,  
Civil Hospital Campus,  
Ahmedabad – 380 016.

**Narendra Modi**  
Chief Minister, Gujarat State





**DR. KETAN DESAI**  
**PRESIDENT**  
Medical Council of India  
New Delhi

**-: MESSAGE :-**

I am happy to know that B. J. Medical College, Ahmedabad has decided to publish a magazine cum news bulletin of B. J. Medical College and Civil Hospital affiliated institutions within the campus.

B.J. Medical College, Ahmedabad is an institution providing higher education in modern medicine and their vast contribution to country and abroad.

On this occasion, being a part of the institution, I extend my warm greetings and felicitations to all associated with this for success.

**(Dr. Ketan Desai)**

**To,**  
**Dr. Bharat Shah**  
**Dean**  
**B.J.Medical College**  
**Ahmedabad.**



**Jay Narayan Vyas**



No.MIN/HFW/THP/DPD/NGO/NRG/

**Minister**

**Health & Family Welfare, Tourism, Devasthan,  
Pilgrimage Development, NGOs, NRG**

**Government of Gujarat**

**1/8, Sardar Patel Bhavan**

**Gandhinagar 382010, Gujarat, India**

**Phone: 079-23238109, 23243502 (O) Fax: 23250135**

**Email: min-health@gujarat.gov.in**

**-: MESSAGE :-**

I am happy to learn that the BJ Medical College, Ahmedabad has decided to publish a Magazine-cum-News Bulletin covering the important activities at the civil hospital as well as medical college. I am sure this publication would serve as a well useful platform for sharing the information and experience through highlighting important case histories dealt with by our experts in the present era of knowledge driven management, I am confident the publication will also provide the immense opportunity for documenting the case studies and research for the larger benefit of the medical fraternity. I hope the quality and coverage of the content will be so maintained that the publication energize to be one of the most sought after reference journal through the sheer quality of its content and coverage. Coming as it does from one of the oldest medical colleges in the state, it must provide a model for similar other colleges and hospitals in the state and outside. This is not going to be an easy task. However, I am confident that we have the necessary expertise and capabilities to surpass the best of the expectations. While the maiden issue is wholeheartedly welcomed, please accept my good wishes for it to become a trend setter in the years to come.

Gandhinagar

15.05.09

**Jay Narayan Vyas**



MOS.W.S.CO.&H.F.W.<sup>2596</sup> 2008.  
Minister of State for Water Supply,  
Co-Operation, Health & Family Welfare  
Block No. 2, 4<sup>th</sup> floor, Sardar Patel Bhavan,  
Gandhinagar-382010  
Phone-(079)-23250143, 23250144  
Fax-(079)-23250145  
Date :-

19 MAY 2009

**-: MESSAGE :-**

I am glad to know that B.J. Medical Collage, Ahmedabad is going to published a **Magazine cum News Bulletin** of B.J. Medical Collage, and Civil Hospital affiliated Institutions within the campus.

I appreciate the efforts to published such a valuable Magazine cum News Bulletin of B.J. Medical Collage & Civil Hospital, Ahmedabad, one of the largest Medical Institution in Asia.

I am pleased to know that the Magazine cum News Bulletin will include various informations on special facilities and services provided by the Hospital, Important Research articles, Interesting clinical cases, Training programmes, attractive workshops, Achivments and Activities of staff and Students and details of Scientific events related to the Hospital, Collage and Institutions within the campus.

I am sure that the active reading and proper use of the Magazine will make the Magazine fruitful, Which will be useful for Doctors, Staff, Students & Patients in long way.

I wish the Magazine a grand success.

With best regards...

(PARBATBHAI PATEL)

To,  
The Dean,  
B.J. Medical Collage, Civil Hospital Campus,  
Asarva, Ahmedabad-380016.





**Ravi S. Saxena, IAS**  
Principal Secretary




Government of Gujarat

Health and Family Welfare Department  
Block 2, 2nd Floor, Sankar Patel Bhawan  
New Sahyadraya, Gandhinagar - 382 010

### **-: MESSAGE :-**

I am very happy to know that B.J. Medical College, Ahmedabad is to publish a magazine cum news bulletin of B.J. Medical College and Civil Hospital affiliated institutions. I am sure that the magazine will disseminate very useful information on the activities and endeavours of the faculty, research scholars and students of the Institute. I do hope that this journal will give adequate circulation of the research papers being brought out by the members of this Institute. This journal is also expected to fill the long felt need for a common platform for sharing information regarding seminars, workshops, training programmes and other events held in the Institute. I do hope that this journal will fulfil a long felt need of the Ayurved fraternity and will play a larger and larger role in future.

On this occasion, I wish to congratulate all the people involved in this venture and convey my best wishes for the success of the magazine.



(Ravi S. Saxena)





## **From The Chairman's Desk.....**

**Dr. Bharat J. Shah**  
Dean,  
B. J. Medical College, Ahmedabad.

Dear colleagues and friends,

It gives me immense pleasure to write for this inaugural issue of our magazine. This magazine will certainly provide a communication channel amongst all medical fraternity.

Our Honorable Chief Minister Shri Narendra Modi has been very supportive for the complete renovation of B. J. Medical College & Civil Hospital complex. The different institutions of Civil Hospital complex will be well equipped with modern day requirements. We are very thankful for his kind support.

Dr. Ketan Desai has been elected as President of Medical Council of India for the second time. On behalf of all, I congratulate him and look forward to his leadership, guidance & support in our manifold activities.

At B. J. Medical College, lecture halls are modernized and made user friendly. All heads of departments are provided laptops. Library is air conditioned with the help of our alumni association and e-journals are available. Post graduation facilities for Biochemistry and Emergency Medicine will start very soon. Administrative office will be computerized. Canteen and auditorium will also be modernized very soon. Our laboratories will be accredited by NABL.

"Deh Dan" Donation of dead body to the Anatomy Department has been a very good tradition of Gujarat. This year our Anatomy Department received a record number of dead bodies. Our students excelled in all the fields and 50 students could pass PMT with flying colours. Our team provided all round support during the difficult time of bomb blast in Civil Hospital complex on 26<sup>th</sup> July 2008. It has been really a time with all round action. I wish B. J. Medical College and all other institutions to achieve greater heights in coming days.

**Dr. Bharat J. Shah**



### From The Editor's Desk.....



It gives us great pleasure to put forward the first issue of **BJKines**. An institution of such a magnitude must have a premier print publication for the esteemed staff members, alumni and friends. This has been made possible with active interest and support of our Hon'able Health Minister Shri JayNarayan Vyas, Principal Secretary Shri Ravi Saxsena, Additional Director of Health, Medical Education & Medical Services Dr. P. D. Vithalani and Dean Dr. B. J. Shah.

The magazine will be published quarterly with features of science, academics and news. The objective of this magazine is to provide platform for our esteemed staff members to publish their scientific research work, share and strengthen the connections with readers. It is in this spirit the theme of our magazine is '**To Educate, Inform and Promote**'. The name of the magazine has been adopted from the term '*Cytokines*' (*cyto-cell, kines-movement*), signaling molecules used extensively in cellular communications in health and disease process. Thus the word **BJKines** encompasses the academic, research and extracurricular activities at all the institutions within the campus.

In addition to scientific research articles and interesting clinical cases, the magazine will also publish scientific events organized by department, publications and achievements of staff members, research projects undertaken by the department and student's achievement. The members are requested to submit the manuscript and relevant information as per instructions to contributors. The initial response has been overwhelming. However, we need to sustain this enthusiasm by the active involvement of all the members. We look forward for your views, opinions and support to make **BJKines** interactive and vibrant. Articles of humour, cartoon, quiz, crossword puzzle etc. are welcome.

We thank the editorial board for having confidence in us and assigning the responsibility of the editorial work. We assure to fulfill the task with sincerity and commitment.

Dr. Mira K. Desai

Dr. Bipin K. Amin



### Campus Update

1. B. J. Medical College & Civil Hospital- A Profile.....10
2. Gujarat Cancer Research Institute - A Profile.....13
3. U. N. Mehta Institute of Cardiology & Research Centre- A Profile.....14
4. Central Library and Internet Centre at B. J. Medical College .....15
5. Accreditation of laboratories at B. J. Medical College & Civil Hospital.....17
6. Scientific Events at B. J. Medical College, Ahmedabad.....18
7. Winning Strokes .....22

### Preliminary Reports

8. Hepatitis B Outbreak in Modasa Town: *How Gujarat Government responded to this deadly infection: Atul Trivedi, Mitesh K. Patel*..... 23
9. A Study of Multidrug Resistant Organisms at Civil Hospital, Ahmedabad : *M. H. Patel, S. T. Soni, M. M. Vegad*.....27

### Short Communications

10. Seminal Vesicle Sparing Laparoscopic Radical Prostatectomy Using A Low-Energy Source: Better Continence And Potency: *Shrenik J. Shah, Ketan D. Desai, Ketan Shukla, Rajesh Sachar, V. Goyal, A. Nath, N. Jain, K. Kapadia, S. Bajaniya*.....31
11. Comparisons of post operative recovery pattern in minimal access vs open anterior thoracic spine surgery : *M. M. Prabhakar, Himanshu C. Panchal*.....35

### Case Reports

12. Left Molar Approach For Excision of Large Oral Cystic Swelling: Our Experience : *Kunjan Joshi, Seema Gandhi, M. I. Shukla, I. A. Chadha, B. J. Shah*.....39
13. *Toxoplasma Gonadit* in Bone Marrow Aspiration: *R. N. Gonsai, H. V. Oza, Tarang Kadam, Neelam Mehta*.....41
14. Student's Activities and Achievements.....42
15. Kaleidoscope Of Events.....43
16. Instructions to Contributors.....47

### Advertisements Rates

Back cover	- 25,000/-	Full page inside	- 5,000/-
Front cover inside	- 15,000/-	Half page inside	- 2,500/-
Back cover inside	- 15,000/-		

D.D./ Cheque should be drawn in favour of  
'Dean B. J. Medical College (Journal)' payable at Ahmedabad.

## B. J. Medical College & Civil Hospital Ahmedabad : A Profile

B. J. Medical College, Ahmedabad, is one of the oldest, largest and advanced premier medical institutions of the country giving admission to 250 students every year. The institute has been listed in the top ten best medical college of India (*The Week*, November 2008). It is a matter of pride and privilege on the part of the student to study in such an institution of international repute. It is one of the largest sources of medical manpower in the country. Each year a new batch of doctors is churned out, well equipped to shoulder the responsibility of health care of the masses. A large number of college students, now serving in the USA have organized *B.J. Medical College Alumni Association*. The association has made significant contribution in the up gradation and modernization of the institute. The institute also offers postgraduate courses in 19 branches of medicine, 5 branches of surgery, 10 branches of diploma and 7 branches in super specialty. It is also recognized center for DNB in different specialties and various courses under IGNOU. It is affiliated to the Gujarat University since 1951 for under graduation and in 1956 for post graduation.

### The Glorious History of B. J. Medical College, Ahmedabad

B.J. Medical College was started in 1871 as the Ahmedabad Medical School. It had humble beginning with intake of 14 students who pursued for Hospital Assistant training. In 1879, it was renamed after the late Hon. Byramjee Jeejeebhoy who donated Rs. 20,000/- to erect this magnificent building and was attached to the Civil Hospital at Gheekanta road. The school grew and became affiliated with the College of Physicians and Surgeons of Bombay in 1917. By 1946, the school obtained affiliation with Bombay University and then achieved higher status for itself to become B.J. Medical College, providing diplomas for L.C.P.S. In 1951, the Gujarat University took over the school, which today flourishes with other allied medical and paramedical institutions, including: M&J Institute of Ophthalmology, M.P. Shah Cancer Research Institute, TB Demonstration and Training Center, Institute of Kidney Diseases and Research Center, Institute of Cardiology and many other special laboratories and medical facilities.

### The College Symbol



It is a shield divided into four quadrants. About and below of these quadrants are Sanskrit and Latin phrases respectively with same meaning of the symbol.

The two opposing corners represent thirteen canons of the International Medical Ethics. In the top left and bottom right corners are the Cock of Gujarat and Serpent intertwined on a dagger of the Aesculapius respectively. The cock as a sign on the imperial banner of Gujarat appeared in the time of Bhimdev the first. Siddharaj Jaysinh raised that banner high and the mighty flag of Gujarat was called as Aesculapius (God of Medicine). The patients from different parts came to the temple of Aesculapius for the treatment which now may be equated with naturopathy. The intertwined serpent on the dagger of the temple goddess has since then symbolized western medicine. The symbol means "*Shall Find A Way, If Not, Make One*"

### Educational approach

The institute emphasizes on an all around development of students. Adequate emphasis is placed on cultivating logical and scientific habits of thoughts, clarity of expression, independence of judgment, ability to collect and analyze information to put in right perspective. The fresh undergraduate students have special orientation and counseling programme and aprons are distributed in 'White coat ceremony'. In addition, free text books are offered to needy students. The meritorious students are appreciated and awarded by medals. A regular MCQ test has been arranged for all UG subjects and interns. The facility for conducting MCQ test for interns has been upgraded by setting up a Computerized MCQ Lab with a question bank of 15,000. All the lecture theatres have been fully equipped with latest audio visual facility. All the departments have been given computers, printers and



laptop for teaching and administration. The Examination Hall and College Auditorium is under the process of renovation. The college library is the largest source of biomedical literature in Gujarat state with latest facility of e-journals.

The institution has more than 350 experienced faculty members. The medical teachers participate as resource persons in National & International conferences, workshops and training programme. The members also actively contribute in research activity and are on the editorial board of scientific journals. The institute also undertakes Blood donation, Eye donation, Cleanliness drive "swachhata abhiyan", Tree plantation and Red ribbon club programme.

### **Civil Hospital**

The Hatheesing and Premabhai Civil Hospital, publicly known as 'New Civil Hospital' is a pilgrimage for ailments where more than 12 lakh patients are treated annually. The hospital caters to all strata of the society and offers all types of ultra modern health care services round the clock to the poor at nominal cost. It is one of the biggest, oldest and modern hospitals in the country with various institutes in its campus that offer multispecialty treatment under one roof. Excellent treatment offered at nominal cost has attracted the patients from Gujarat as well as other parts of the country.

### **The Glorious History of Civil Hospital, Ahmedabad (CHA)**

It was initially founded as tertiary care hospital in 1841 with a limited aim. With an aim to help poor, three donors had donated Rs.88,000 to the hospital. It started functioning as first PUBLIC HOSPITAL in 1856 in the name of Hatheesing and Premabhai Civil Hospital at the old collector office, GheeKanta. There were only 80 beds and it was run by 12 doctors, 60 nurses and other paramedical staff. Sheth Shree Hatheesing Kesarising donated Rs.50,000/-. Nagarsheth Shree Premabhai Hemabhai donated Rs. 20,000/- while Surgeon General D. Wyllie donated Rs.13,000/-. An English lady Miss Mary Lambert had contributed and

also collected donations from England for the operation theatre. Khan Bahadoor Nowroji Pestonji Vakil had also contributed for the establishment of Ophthalmic ward, Parsi ward, European ward and maternity ward.

As the requirements increased, efforts were initiated to construct a new building for the hospital. A huge land was allocated in Jahangirpura-Asarwa area and construction started in the 110 acres of land. A newly constructed giant building was commissioned in 1953 under the supervision of Dr. C. B. Miller, the first Civil Surgeon.

The present four storied building has 8 blocks from O to G consisting 39 wards. There are general wards, special rooms, operation theaters, post-operative wards, Emergency wards, ICU, MRI Imaging Centre etc.

### **Health Care Facilities**

Treatment by all specialties like Medicine, Surgery, Pediatrics Gynecology, Urology, Cardiothoracic, Plastic surgery, Neurosurgery, Gastroenterology, ENT, Ophthalmology, Orthopedics, etc are offered. Ayurvedic and Homeopathy treatments are also offered.

During the last five years, several latest health care facilities have been added with Hi-Tech equipments. These include the MRI Centre, CT Scan, Neurosurgical and surgical operative wards, Neonatal ward, renovated gynecology ward, incinerator plant, renovated Casualty Ward, Tribal ward, Blood Bank and Tissue Bank etc. A project for the renovation of building and up gradation of the health care services in a phase wise manner has been initiated by the Government of Gujarat.

A well equipped and functional Trauma Center has been set up having 5 operations theaters and 70 beds in four wards. These rooms have Hi Tech equipments including ventilator machines in the ICU with 11 beds to cater to the critical patients. The center provides all type of life saving treatment and surgeries under one roof for severely injured patients, particularly in natural or man made calamities. The Blood Bank of CHA is a model bank of the state having all types of modern equipments and facilities. It was upgraded with the financial assistance from the European Commission and the state government. The First ART Centre has been set up for

HIV positive patients in the state at this hospital. It offers treatments to the affected patients free of cost. Over 7 thousand patients have benefited in the last year at this centre. A Tissue Bank has also been set up in the hospital to sterilize and store the tissues like bone and skin from live or post-mortem donors.

#### **National Accreditation Board For Hospitals And Health Care Providers(NABH):**

Department of Health and Family Welfare, Government of Gujarat and Quality Council of India, New Delhi signed a MoU for providing consultancy services for total quality management system and seeking Accreditation for teaching hospitals. Gujarat is the first state in the whole of Asia to bring its public hospitals under NABH standards. Civil Hospital, Ahmedabad is one of the teaching hospitals which is going for the NABH Accreditation.

#### **Important academic activities at CHA**

A number of research projects and clinical trials are conducted at CHA at a regular basis as per the Good Clinical Practice guidelines. The Rapid Response Team comprising doctors and support staff provide valuable services in times of medical emergencies like hepatitis, Bird Flu, Influenza Flu etc. Various types of community services like Immunisation Programmes, School Health Programmes, reconstructive surgeries for cleft lip and cleft palate, Non Scalpel Vasectomy camps, corrective surgeries for leprosy affected patients, IMNCI programmes are carried out at the hospital. The staff of the hospital is regularly trained in biomedical waste management, Infection control, Basic and Advanced Cardiac Life Support, Emergency Care etc. Thus they are well equipped and trained in any natural and manmade calamities.



**GUJARAT CANCER & RESEARCH INSTITUTE**  
**(M.P. Shah Cancer Hospital)**  
**REGIONAL CANCER CENTRE**

Civil Hospital Campus, Asarwa, AHMEDABAD - 380 016, GUJARAT

Phone: 079-22688000 (Hunting) Fax No. : 079-22685490

Email: [geriad1@bsnl.in](mailto:geriad1@bsnl.in) <<mailto:geriad1@bsnl.in>> Website: [www.cancerindia.org](http://www.cancerindia.org)

---

**Special facilities and Services provided by the hospital**

The GCRI caters to provide state-of-the art diagnostic and therapeutic services to the patients of all types of origin and financial background suffering from cancer. Its scope also encompasses registering the tumor burden in the population, prevention through awareness drives, solving local medical problems through research and training of medical students as well as imparting knowledge to the medical fraternity.

- Conducts OPD and indoor activities for diagnosis, staging, treatment and monitoring disease progress.
- Renders free or subsidized treatment to needy patients without any distinction of caste, creed or religion.
- Provides training to new generation of doctors as well as practicing fraternity.
- Offers unique experimental and research-oriented diagnosis and treatment services to test new forms of diagnosis and therapy in order to improve quality of life and expected survival of those afflicted with cancer.
- Organizes public education programmes, the diagnostic and blood donation camps, conferences and other scientific meets.
- Displays a permanent Cancer Awareness and Anti-tobacco exhibition and arranges other preventive efforts.
- Runs instruction based Hospice Centre, Home-Hospice Services and Rehabilitation Service.

## U. N. Mehta Institute of Cardiology & Research Centre- A Profile



Dr. R. K. Patel  
Director  
U. N. Mehta Institute of  
Cardiology & Research Centre,  
Ahmedabad

BJ Medical College has produced a number of stalwarts and luminaries in the field of Medical service and education as well. Like all of us, I am proud to be a Bjlite.

I am a director of UN Mehta Institute of Cardiology & Research Centre (UNMICRC), Ahmedabad.

The Institute is attached with B. J. Medical College for Super Speciality Cardiac Teaching Courses. Till date, UNMICRC has given 26 Cardiologists, graduated from this Institute, who are serving as Cardiologists, either in the Institute, in the State of Gujarat, or in India.

UNMICRC is functioning since 1992 in the Campus of Civil Hospital, just adjoining BJMC. UNMICRC is a Teaching, Research, Academic and Charitable Emergency related Cardiac Institute. The Institute is having super specialty teaching courses in Cardiology and Cardio Vascular Thoracic Surgery. UNMICRC possesses a state of the art Infrastructure facility in form of Equipments required for Quality Care with Accountability.

At the moment, Institute is having a capacity of 200 beds, which is going to be 450 bedded Cardiac Institute, after expansion and upgradation in short time. After expansion, the Institute will be the biggest in capacity as Heart Institute in India.

This Institute runs a unique Free School Health Cardiac Program, which is the first and only of its kind, by Govt. of Gujarat in the Country, where free cardiac treatment is given to the children of Gujarat State from age group of 0-14 years whether school going (Private and Govt. School) or non school going and 14 to 18 years of School going children of the State.

Free Cardiac treatment including procedure / Cardiac surgery to Below Poverty Line (BPL) patients of Gujarat State, also to Scheduled Castes and Scheduled Tribes patients of Gujarat State.

To add feather in the cap of UNMICRC, the Institute gives Emergency Medical Cardiac Treatment to any patient for initial 12 hours to include First Golden Hour of Cardiac Treatment without any advance payment just to save the precious life. This scheme is run by the Institute only of its kind in the State.

May God bless all of you.

Dr. R. K. Patel  
Director  
UNMICRC, Ahmedabad



## Central Library and Internet Centre at B. J. Medical College.

Central library & Net Centre of B. J. Medical College & Civil Hospital, Ahmedabad came into existence in year 1946. It caters the information needs of over 2200 medical students, medical educationists, researchers, policy makers and planners. The library works 360 days in a year from 9.00am to 2.00am. It is the largest resource of bio-medical literature in this state. Besides the regular members, it is open to entire bio-medical community of state to consult wide range of literature available. It has a collection of 44544 books and bound volume of journals, 3573 dissertations, 2514 reports, proceedings etc., 53 video-cassettes and 222 compact discs. The library subscribes to 1514 electronic journals and 116 electronic books under a state consortium(Gujarat medical consortium).

### Info-Services

New information technologies have brought revolutionary changes in the field of library and information science. Health science libraries are undergoing rapid changes with the advent of these technologies. To cope-up with these changes, the library has introduced various state-of-the-art information technologies in last ten years with the financial help and kind support of Govt. of Gujarat, Govt. of India, B. J. Medical College Alumni Association, USA & Ahmedabad and Pharmaceutical Industries of this state.

### Computer Labs

It has full fledged 2 air-conditioned Computer Labs. Lab- I with 15 PCs, printers, scanner, multi-medias etc. for undergraduates and Lab-II with 20 PCs, printers, scanner, CD writers, server, multi-medias etc. for postgraduates and faculty members.

### Establishment of Virtual Medical Library & Gujarat Medical Consortium

State government has established "Virtual Medical Libraries" in our state during the year 2006. Under this project, the users of all the six medical libraries are able to access e-databases of international journals and books through internet under **Gujarat Medical**

**Consortium.** Initially it was covering 290 e-journals and 82 e-books has reached now up to 1514 electronic journals and 116 electronic books in the current year 2008-09. **Our library is the Coordinator for this State level Project.** All the e-publications are renewed for the current year.

### Broadband Connectivity

With the financial assistance of state Government the library could get high speed Broadband Connectivity which is being renewed every year.

### Net-working with the departments of College & Hospital

Under a Gujarat State Networking Project in 2004, the library of this institution has been connected with all the 25 departments of the college and civil hospital through networking.

### Networking in Civil Hospital Campus

Under the above project of the state govt., all the seven hospitals and institutions, viz. Civil Hospital, Institute of Kidney Diseases, U. N. Mehta Cardiology Institute, Ophthalmic Institute, Dental College & Hospital, Cancer Institute and Paraplegia Institute are also connected with the library of this college through networking.

### Internet Connection through GSWAN

24 hours Internet facility has been given to each department of this college and hospital through Gujarat State Wide Area Network (GSWAN) under the above project in year 2004. Moreover, each of the above institution and hospital has also been given internet connectivity.

### Donation of 20 Computers by a Pharmaceutical Company

J.B. Chemicals & Pharmaceuticals Ltd. and Indian Drug Manufacturer's Association have donated 20 P-4 Computers along-with 20 computer tables & chairs,

two air-conditioners etc. to the library of this college in 2004. Thus since 2004 the library has two full-fledged Computer Labs, one used by undergraduate students and the other one is used by the post-graduates and faculty members of this college.

#### **Free Text books for ST student under tribal welfare scheme**

Total 951 Text books worth Rs. 5,24,899/- purchased during 2008-09 was given to 116 ST student for their study.

#### **Books and furniture from Donation**

About 1000 text books worth Rs.10.00 lacs were purchased in year 2003 from the B. J. Medical College Alumni Association, USA funds. B. J. Medical College Alumni Association, A'bad donated funds for 200 steel chairs for the Reading Halls in year 2004.

#### **Renovation of Reading Rooms with Air-conditioning**

The reading rooms for Faculty and Post-graduates have been air-conditioned and furnished with latest furniture by B. J. Medical College Alumni Association.

One reading room for under graduate is renovated and air-conditioned with latest furniture by B. J. Medical College Alumni Association, USA in Feb.09. The renovation of other U.G reading rooms with air-conditioned will be taken up soon.

#### **Establishment of Electronic Information Cell**

A well furnished and air-conditioned Electronic Information Cell established with the help of B. J. Medical College Alumni Association USA in year 2000 with 15 computers, 3 servers, 8 printers, software's, multimedia systems, modem, microphones, speakers, internet connection etc. for the use of students.

#### **Multi-media LCD Projector**

For high electronic presentation on big screen one PHILIPS multi-media projector has been donated by BJMCAA, USA in year 2001. It is being extensively used for conducting various academic programs by faculty members of the institution.

#### **Audio-visual Centre (Sanskriti Hall)**

Established in 1996 with the assistance of BJMCAA,USA. Air-conditioned hall with a capacity of 125 seats, equipped with Television, VCR, Over-Head Projectors, Sound System etc. and is extensively used for the academic programs, seminars, workshops, conferences, training, CME and teaching purposes.

#### **Library Computerization & Automation**

Library Management Software name "LIBRARIAN" is purchased recently and the services like acquisition, catalogue, circulation, serial control etc will be computerized. Presently data entry & bar-coding of books/journals etc. is in process.

#### **Establishment of Inter-Linking Centre**

Under a national project of Ministry of Health & Family Welfare, Govt. of India has identified our library for inter-linking with the National Medical Library in year 2001. Under this project, library is equipped with computers, scanners, internet connectivity and for running the centre.



# Accreditation of Laboratories at B. J. Medical College & Civil Hospital, Ahmedabad.

## Background

The Government of India has authorized National Accreditation Board Of Laboratories (NABL) as the accreditation body for testing & calibration of laboratories. NABL is a registered Society under the Societies Registration Act 1860 operates as an autonomous body. It has been established with the objective of providing Government, Industry Associations & Industry in general with a scheme of laboratory accreditation which involves third party assessment of the technical competence of testing & calibration laboratory. NABL offers laboratory accreditation services in a non-discriminatory manner.

## Benefits of Accreditation

1. Adds credibility and authenticity to the reports.
2. Better control of laboratory operations & feed back due to sound Quality Assurance System.
3. Enhances customer confidence & satisfaction.
4. Saving in terms of time & money due to reduction or elimination of need for retesting of products.

## Scope of NABL Accreditation in Medical field

- Clinical Hematology
- Clinical Microbiology
- Clinical Biochemistry
- Cytology
- Histopathology

## Preparation for Accreditation

Government of Gujarat entered in MoU with QCI for NABL Accreditation. As Civil Hospital laboratories has decided to seek NABL accreditation, a definite plan of action has been initiated. Dr. R. N. Gonsai has been nominated as Director to co-ordinate all activities related to seek accreditation.

A list of NABL documents have been prepared, to get fully acquainted with relevant NABL documents & understand the assessment procedure & methodology for filling an application. A Quality manual, Quality System Procedure & Primary Sample Collection Manual has been prepared for procedures and work desk instructions etc.

Dr. Venketesh & Dr. Viruprakash has been appointed as lead assessor & QCI representative by the Government of India to establish and operate national accreditation structure in the country. A team of about 75 people are working continuously to seek accreditation under the close observation of Technical Manager Dr. M. M. Vegad, Quality Manager Dr. H.M. Goswami & Deputy Laboratory Director Dr. Chhabara. The calibration of equipment has been carried out by Electronics and Quality Development Centre (EQDC), Gandhinagar which is NABL accredited. The procurement of equipments like Automatic Tissue processor, cryostat, Automatic ESR analyzer and renovation of Histopathology & cytology department are under process.

An Internal Quality Control of the department and Inter-laboratory Quality Assurance for hematology with Green cross & Supratech laboratories have been initiated. External Quality Assurance with RIQAS- an International body, in Clinical Hematology has been started since June-08. RIQAS establish a target scoring system for every parameter to understand efficiency of cell counters. External Quality Assurance with St. Johns Medical College, Bangalore for cytology & Histopathology have been initiated. Internal audits in Pathology, Microbiology & Biology department to evaluate the nonconformities, to assess the degree of preparedness of laboratory for assessment have been arranged. The sensitization and training of the staff members by QCI representative is also continuously going on. The department expects to apply for pre-assessment audit by end of April 2009 and accreditation by the year 2010.

## Scientific Events at B. J. Medical College, Ahmedabad

### Anatomy Department

- QUIZ competition conducted by Dr. ( Mrs. ) C. A. Pensi, Dr. D. J. Trivedi, Dr. R. S. Cautam, Dr. S.M. Ruparel, Dr. S. G. Oza, Dr. H. B. Rajput on 08<sup>th</sup> - 10<sup>th</sup> Sept. 2008.
- Cadaveric workshop of kshaarsootra training conducted by Dr. H.R.Shah, Dr. A.B.Nirvan, Dr. K.S.Desai on 6<sup>th</sup> Jan. 2009.
- Cadaveric workshop of pain management by Dr. Divya Choksi and Dr. Rajesh Patel (M.D. Anesthesia ) (U.S.A.) on 15<sup>th</sup> March, 2009.
- Guest lectures by Dr. H. R. Jadav on Rectum and Anal Canal (Gross and Clinical Anatomy) at Directorate of I.S.M.H. Gandhinagar, on 5<sup>th</sup> Jan 2009.
- Guest lectures by Dr. A. B. Nirvan on Perineum ( Gross and Clinical Anatomy) at Directorate of I.S.M.H. Gandhinagar, on 5<sup>th</sup> Jan 2009.
- Undertaken Social awareness activities for Dead body donation and embalming. The staff members receive dead body by donation with full honour in presence of Dean throughout the year.

### Medicine Department

- Conducted WHO approved four workshops for '*Stage Diabetes Management (SDM)*'. Dr. B. D. Mankad & Dr. Asha N. Shah are designated as National resource persons.
- Guest lectures by Dr. Asha N. Shah,
  - "Management of type II Diabetes Mellitus" on World Diabetes Day at Ahmedabad Medical Association on 14<sup>th</sup> November 2008.
  - Faculty at "Staged Diabetes Management Programme" for M.O. on 19<sup>th</sup> Oct.2008 on "behalf of Interdimentional Diabetes centre" along with WHO.
  - "Infective Diarrhoea" at Association of Physician of Ahmedabad in Sept. 2008.
  - Attended European Association for Study of Diabetes in Rome from 7<sup>th</sup> to 11<sup>th</sup> September 2008.
- Guest lectures by Dr. Bipin. K. Amin,
  - 'Approach to a case of Hypertension' IMA-Bopal on 20<sup>th</sup> September 2008
  - 'Current status of health services for PLHA' in state Annual Conference of North Gujarat Physician's Association at Mt Abu on 18<sup>th</sup> January 2009.
  - 'Natural history of HIV disease and WHO staging' at school of Tropical medicine Kolkata on 4<sup>th</sup> March 2009.
  - 'Universal precaution and PEP' at IMA Ahmedabad on 8<sup>th</sup> March 2009.

### Microbiology Department

- Guest lectures by Dr. Mitesh Patel on "Laboratory Diagnosis of STD" for Medical Officers & laboratory Technician, GSACS in February 2009.
- Guest lectures by Dr. Nidhi Sood, "Role of laboratory in HIV diagnosis" in training conducted by NACO in February 2009 at ART centre and "Nosocomial infection an Overview" at NSS on 26<sup>th</sup> March 2009.



- Published a paper entitled "Seroprevalence of HIV, Hepatitis B, Hepatitis C & Syphilis in Commercial sex workers of Ahmedabad city", by Dr. Sumceta T Soni & Dr. Mitesh H. Patel in *Gujarat Medical Journal*, Feb 2009 Vol 4(2).

#### **Nursing School**

- The students prepared and displayed exhibitions on the project on A.V.AIDS, Nirogi Baal Varsh, Ante natal Care, PNDT Act, Beti Bachao Abhiyaan etc.

#### **Physiology Department**

- Research project on, "Stress Audit of Teenage Student of Different Study Steam and "Different Limbs of Yoga Practice and its effect on Control of Diabetics" by Dr H. C. Parikh for the year 2008-09.
- Organized a workshop on "Climate Change, Impact on Health & Hospital Waste Management" on 19-02-09 under "National Environment Awareness Campaign". Sponsored by Ministry of Environment & Forests, Govt. of India, New Delhi.
- Dr. Anju S. Mehta has been nominated for WHO fellowship for Training Programme on "Certified Course for Doctors in Industrial Health" from 27 January to 25 April 2009.
- Guest lecture by Dr. R. Dixit in "Workshop on Kshaar Sootra for Govt. Technical Officers" on 5<sup>th</sup> Jan. 2009 organized by Directorate, I.S.M., Govt. of Gujarat at SHIFW, Ahmedabad.
- Dr. R. Dixit, Nominated as Member of Editorial Board of Indian Medical Journal for the term 2006 - 2009, an Official Journal AIGPA, Published from Kolkata, India.
- Dr. J. M. Jadeja wrote a book "CHINGARI" in Gujarati and Hindi (concepts to solve serious national issues ) The book was released by Hon. Chief Minister Shri Narendra Bhai Modi at a function held at Bhucharmori Shahid Smarak Dist. Jamnagar.
- Published a paper entitled "Cardio Electrographic changes in patients with Chronic Obstructive Pulmonary Discase". Dr. C. J. Shah, Dr. R. S. Trivedi, Dr. Jasmin Diwan and Dr. R. Dixit in Indian Journal of Applied - Basic Medical Science: Sept.2008.

#### **Pathology Department**

- Successfully Organized "CYTOCON-2008" National conference of Indian Academy of Cytology which was attended by 450 delegates and international faculty

#### **Pharmacology Department**

- Undertaken the manuscript management of *Indian Journal of Pharmacology*, an index journal and official publication of Indian Pharmacological Society. The editorial team includes Dr. R. K. Dikshit as Executive Editor, Dr. Mira K. Desai and Dr. Chetna Desai as Assistant Editors, Dr. Anuradha Gandhi and Dr. Prakruti Patel as Editorial Assistants.
- The editorial team organized a workshop on "Scientific Writing" on 20<sup>th</sup> March 2009. It was attended by 42 delegates from academic institutions as well as pharmaceutical industry from all over Gujarat. The workshop was interactive, participatory and focused on the basic skills of writing a research paper by imparting knowledge, sharing viewpoints and training through group exercises.
- Actively involved in reporting Adverse drug reactions from various departments of Civil Hospital as well as from private practitioners.

- Guest lectures by Dr. Mira K. Desai,
  - Resource person at 'OSCE & OSPE' and Evaluation Methods in Medical Education' workshops at MCI platinum Jubilee celebration organized by N. H. L. Municipal Medical College, Ahmedabad and Medical College, Bhavnagar.
  - 'Economic burdens of Adverse drug reactions' at National Pharmacovigilance Workshop ' organized at Kolkata in 9-11 Jan. 2009.
  - 'Safety reporting in clinical trials' at AICTE seminar on 'Clinical Research' on 13-14<sup>th</sup> Feb. 2009 , Gandhinagar.
  - Resource person at International training course on 'Promoting Rational Use Of Drugs In The Community' sponsored by WHO, at IHMR, Jaipur, 23<sup>rd</sup> Feb.-5<sup>th</sup> April 2009.
- Guest lectures by Dr. Chetna Desai,
  - Medical Educational Technology workshops and MCI Platinum Jubilee celebrations in the state
  - Resource Person at the National Pharmacovigilance Programme for ASU Medicines.
  - Awarded CMCL FAIMER Fellowship in Medical Education
  - Resource person at the CMCL FAIMER and GSMC FAIMER fellowship programme.
- Guest lecture by Dr. A. M. Gandhi on "Small Group Teaching Methodology" at MCI Platinum Jubilee Celebration at M. P. Shah Medical College, Jamnagar, Feb. 2008.
- Poster presentation on, 'Prospective analysis of ADRs in geriatric patients at CHA' by Doshi MS, and "Some interesting and unusual ADRs reported in at CHA" by Prajapati SA, Annual conference of IPS at AIIMS, New Delhi Dec. 2008.
- Paper Presentation on, "A prospective analysis of serious ADRs reported in patients at CHA' by Mor M N, Annual conference of IPS (Gujarat Chapter) at Rajkot in Feb. 2009

## Preventive and Social Medicine

- Training Program
  - 'Outbreak investigations' sponsored by WHO from 22<sup>nd</sup> to 29<sup>th</sup> June 2008
  - 'Field epidemiology training programme' for district surveillance officers of Kerala, Andhrapradesh and Puducherry from 20<sup>th</sup> Dec.08- 3<sup>rd</sup> Jan.09 and 21<sup>th</sup> Feb.-7<sup>th</sup> March 09.
  - 'RTI - STI training' for MOs. FHS and lab. technician of Ahmedabad and Gandhinagar districts
  - 'HIV - TB training' to Medical officer and counselor of ICTC centres
  - IMNCI training to the Medical Officers, staff members of Sabarkantha districts and Civil Hospital, Ahmedabad
  - 'EPI INFO' training program for data analysis to the resident doctors
- Research Project :
  - ICMR Task Force Study entitled "Consumption pattern of carbonated soft drinks of Indian population at different times of the year" by Dr. A. Bhagyalaxmi
- Public Health Activities
  - Integrated Rural AIDS Awareness Program (IRAAP) baseline HIV/AIDS survey of Mehsana district, by Dr. Shikha Jain



- IDD Resurvey of nine district of Gujarat state (Ahmedabad, Surendranagar, Mehsana, Sabarkantha, Gandhinagar, Patan, Banaskantha, Kheda, Anand)
- Published paper entitled 'Study of perception and practices in prevention of infection amongst Dental Surgeons', Journal of the Indian Practitioner(Vol61,no.11,Nov2008) by Dr. Mahajan, Dr. A. Bhagyalaxmi & Dr. Anjali Singh.

#### **TB and Chest Diseases Department**

- One of the 12 centers in INDIA to have ICMR PROJECT to carry out Prevalence of Asthma in Gujarat since October 2006.
- Faculty members are zonal and state level facilitators/trainers in HIV-TB and RNTCP activities.

#### **Gujarat Cancer and Research Institute**

##### **Radiotherapy**

- Dr. Maitrik Mehta won Best Paper Award at 5<sup>th</sup> West Zone Chapter of AROI, in Feb. 2008.

##### **Division Molecular Endocrinology II**

- Ms. Toral Kobawala, won the best Essay Award for essay entitled "Modern techniques in drug delivery" and Rajnikant Baxi Award for the best poster presentation on "Molecular alterations in oral carcinogenesis: Significant risk predictors in malignant transformation and tumor progression" at IACR, February 7-9, 2008.

##### **Immunohistochemistry and Flow cytometry Division**

- Ms. Shalvi Mehta, Junior Research Assistant, won first prize for oral presentation in 32<sup>nd</sup> Annual Conference of Gujarat Pathologists & Microbiologists, February 3, 2008.

#### **Research projects, training programs, community programme at GCRI**

- Research projects - 51
- Training programs, CME, workshops - 12
- Community Programs
  - National Registry Programme - ICMR
  - Ahmedabad District Cancer Control Programme - Govt. of India under NCCP
  - Prevention of cancer - Anti-Tobacco drive
  - Early detection - Vasma Centre & Cancer Detection Camps
  - Hospice care; Home Hospice care
  - Helping hand to poor patients
  - Telepathology and Telemedicine projects

## Winning Strokes

*Proud moments for the Achievements and Excellence of our team.....*

*BJMC congratulates them all !!!!*

- **Dr. Ketan Desai**, Professor & Head of Urology, has been honored the prestigious position of **President of Medical Council of India**.



- The institute successfully organized **A Regional Workshop-West Zone** on “**Medical Education Technology**” under MCI platinum jubilee celebration on 10<sup>th</sup> January 2009.
- Anti-Retroviral Therapy (ART) centre has been recognized as “**Centre Of Excellence And Training Institute**” for HIV care, support and treatment by NACO, Government of India. **Dr. B. D. Mankad** is the nodal officer and **Dr. Bipin K. Amin** is the training in charge. He has successfully conducted more than 30 workshops and trained faculty members of different medical colleges and health institutions of the country. The centre has also conducted more than 40 workshops for medical officers and paramedical staff of medical education and services. It is the only centre for 2<sup>nd</sup> line ART drugs for the states of Gujarat, Rajasthan and Madhya Pradesh. **Dr. B. D. Mankad** has been trained at Thailand in Nov. 2008 for II line ART by WHO.
- **Tuberculosis and Chest Diseases Department** is the **first DOTS-PLUS SITE** in INDIA to have **DOTS-PLUS programme** implemented by Govt. of India.
- The **central library** is the **Coordinator for State level Project of electronic journal**. It subscribes to 1514 electronic journals and 116 electronic books under a state consortium (Gujarat Medical consortium).
- **Polio Laboratory at Microbiology Department** has been **accredited by WHO** for ITD facility in year 2008-2009.
- The Department of Skin and V.D. is recognized as a **Centre of Excellence** for Sexually Transmitted Infections. The present centre is developed as the Regional S.T.D. reference, Research and Training Centre. This will be equipped for early diagnosis, treatment, prevention of drug resistance of these infections. It will also provide facilities for research and training in this area.



# Hepatitis B Outbreak in Modasa Town : *How Gujarat Government responded to the deadly infection.*

Atul V. Trivedi\*, Mitesh K. Patel\*

## ABSTRACT

Hepatitis B is unusual to occur as an epidemic in general population. Recently Modasa town of Sabarkantha district witnessed the outbreak of Hepatitis B. Out of 326 confirmed cases, 72 deaths were reported with case fatality rate of 22.08%. Department of Health and Family Welfare, Government of Gujarat launched several important steps to control this epidemic. Mass Immunization campaign in Modasa town was undertaken successfully. Observations of this outbreak are documented in this report.

**Key word :** Hepatitis B Virus, Mass immunization program, Injection safety.

## Introduction

Hepatitis B is an important etiological factor for acute and chronic hepatitis, cirrhosis of the liver and hepatocellular carcinoma thus representing one of the most serious public health problems. Gujarat has experienced recently one of the major outbreaks in Modasa town in Sabarkantha district during month of February, 2009.

Hepatitis B is unusual to occur as an epidemic in general population. However, several outbreaks have been reported in healthcare provider (medical and paramedical population) in India and world wide.

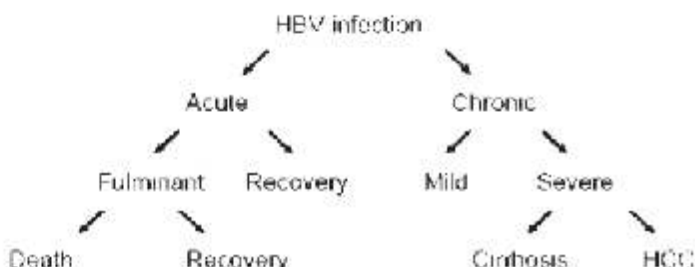
## Problem Statement

Hepatitis B virus (HBV) infection is an international health problem with an estimated prevalence of 2-7% in India. HBsAg carrier rate varies from 0.1 to 20% in different population around the world.<sup>1</sup> The HBsAg positivity in children below 15 years in India ranges from 1.3-12.7%, while in adults it is 3.3 -8.6% and in antenatal pregnant women ranges from 1-12.3% with a mean of 4.22%.<sup>2</sup>

## Hepatitis B Virus

The hepatitis B virus, a hepadnavirus, is a 42 nm partially double stranded DNA virus, composed of a 27 nm

## Spectrum of liver disease after HBV Infection



nucleocapsid core(HBcAg), surrounded by an outer lipoprotein coat (also called envelope) containing the surface antigen (HBsAg). The family of hepadnaviruses comprises members recovered from a variety of animal species, including the woodchuck hepatitis virus (WHV), the ground squirrel hepatitis virus (GSHV), and the duck HBV. Common features of all of these viruses are enveloped virions containing 3 to 3.3 kb of relaxed circular, partially duplex DNA and virion-associated DNA - dependent polymerases that can repair the gap in the virion DNA template and have reverse transcriptase activities. Hepadnaviruses show narrow host ranges, growing only in species close to the natural host, like gibbons, African green monkeys, rhesus monkeys, and woolly monkeys.<sup>2</sup>

## The hepatitis B virus life cycle

The HBV virion binds to a receptor at the surface of the hepatocyte. The mechanism of HBsAg binding to a specific receptor to enter cells has not been established yet. Viral nucleocapsids enter the cell and reach the nucleus, where the viral genome is delivered.<sup>2</sup>

\* Assistant Professor,  
Preventive and Social Medicine,  
B. J. Medical College, Ahmedabad.

## Stability of Hepatitis B Virus

Infectivity is lost after autoclaving at 121° C for 20 min or dry heat treatment at 160° C for 1 hour. HBV is inactivated by exposure to sodium hypochlorite (500 mg free chlorine per litre) for 10 min, 2% aqueous glutaraldehyde at room temperature for 5 min, heat treatment at 98° C for 2 min, formaldehyde at 18.5 g/l (5% formalin in water), 70% isopropylalcohol and 80% ethyl alcohol at 11° C for 2 min.<sup>2</sup>

## Pathogenesis

The course of hepatitis B may be extremely variable. Hepatitis B virus infection has different clinical manifestations depending on the patient's age at infection and immune status, and the stage at which the disease is recognized. During the incubation phase of the disease (6 to 24 weeks), patients may feel unwell with possible nausea, vomiting, diarrhea, anorexia and headaches. The patients then have clinical jaundice although low grade fever and loss of appetite may improve. The asymptomatic cases can be identified by detecting biochemical or virus - specific serologic alterations in their blood. These patients may become silent carriers of the virus and constitute a reservoir of infection.

Most adult patients recover completely from their HBV infection, but about 5 to 10%, will not clear the virus and will progress to become asymptomatic carriers or develop chronic hepatitis possibly resulting in cirrhosis and /or cancer. World wide, Hepatitis B causes about 4 million acute infections, about 1 million deaths occur each year due to chronic forms of the disease and about 350 million people are estimated to be infected chronically with HBV. HBV is about 100 times more infectious than HIV.

## Role of non- human primates in the transmission of HBV

Only non-human primates can develop productive HBV infection are the great apes (e.g. chimpanzees, orangutans and gorillas). Chimpanzees have served as the model for the study of HBV infection for over 20 years.<sup>2</sup>

## Hepatitis B Vaccine

The World Health Organization recommends immunization of all children with three doses of 10 micrograms each of hepatitis B vaccine given intramuscularly at 0,1,6 months of age. Two different vaccines are available for HBV- Plasma derived and recombinant DNA. When administered properly, hepatitis B vaccine induces protection in about 95% of recipients. A safe and effective vaccine against HBV infection has been available since last 20 years. HB vaccine is effective in preventing HBV infection when it is given either before exposure or shortly after exposure. At least 85% to 90% of HBV associated deaths are vaccine preventable.<sup>3,4,5,6,7</sup>

## Current epidemic

The first case was admitted to Sarvajanic Hospital, Modasa on 26<sup>th</sup> January, 2009. Since then total 326 confirmed cases were reported to health authority up to 6<sup>th</sup> April, 2009. Total 72 deaths were reported and thus case fatality rate is 22.08%. Rapid surveillance system has been established in the district and regular surveillance is going on in Modasa town and in Sabarkantha district to find out suspected cases in the community. The demographic profile of the patients with hepatitis B is as shown in table- 1. A majority of the cases were males in the age group of 13 to 45 years.

**Table 1 : Morbidity due to Hepatitis B (confirmed cases) according to age and sex distribution at Modasa Town (Data up to 06/04/2009).**

Sr. No.	Age	Male (%)	Female (%)	Total (100)
1	0 to 12 Year	8 (50.00)	8 (50.00)	16 (100)
2	13 to 45 Year	158 (64.23)	88 (35.77)	246 (100)
3	46 to Above	41 (64.06)	23 (35.94)	64 (100)
Total		207 (63.50)	119 (36.50)	326 (100)



**Table 2 : Mortality due to Hepatitis B according to age and sex distribution at Modasa Town (Data is up to 06/04/2009.)**

Sr. No.	Age	Male (%)	Female (%)	Total (100)
1	0 to 12 Year	2 (66.67)	1 (33.33)	3 (100)
2	13 to 45 Year	34 (65.38)	18 (34.62)	52 (100)
3	46 to Above	9 (52.94)	8 (47.06)	17 (100)
Total		45 (62.50)	27 (37.50)	72 (100)

Similar to table 1, mortality due to hepatitis B also matches proportionately to morbidity.

### **Response to Outbreak (Prevention and Control Measures)**

Looking at severity of condition and gravity of problem in community a rapid operation were launched to control epidemic. Expert teams from NICD, Delhi and NIV, Pune, visited the place as and when needed and state health authority took control measures in consultation with them. Protocol for diagnosis and treatment was developed to guide district health authority.

Treatment of cases and diagnostic facility for suspected cases were established in district as per the protocol. Special ward was established in Civil Hospital, Ahmedabad with all the facility to tackle any kind of emergency development for patients of Hepatitis B only. Confirmation of disease was done at each level (from district hospital to state reference laboratory at BJMC, NIV, Pune and NICD, Delhi) to check high mortality. Looking at age distribution, adults were highly affected and detailed analysis confirmed that mode of transmission was from unsafe injection practices by private practioners in this town and surrounding area. In current epidemic high case fatality was attributed to mutant hepatitis B virus which caused fulminant liver disease resulting in sudden death.

Currently 158 patients are on Anti viral treatment (Tab. Lamivudine) as on date 24/04/2009. The treatment is free of cost. One tablet Lamivudine (100mg) is given per day, for 90 days without fail to each case of Hepatitis B in presence of health worker as per strategy of DOT in RNTCP. As per the advice and guidance from National Institutes, whole population of Modasa town was vaccinated for Hepatitis B by the mass immunization campaign. It was planned to give three doses of Hepatitis B vaccine with one month interval. First round of mass

immunization in Modasa town was done on 23<sup>rd</sup> February 2009 and second round on 22<sup>nd</sup> March 2009. Mass Immunization of Hepatitis B is done for the first time at the international level on such a large scale.

Micro-planning was done with all the precautions of injection safety and cold chain maintenance. Quality assurance was given top most priority in this mass immunization program. Total 60 booths were created to provide vaccination on first day and door to door round was planned next day onwards to provide services to beneficiaries who cannot walk up to booth. Table 3 shows average trained staff per booth.

**Table 3 : Available staff at booth and their qualification**

Sr. No.	Staff	Position per booth
1	Average staff per booth	11
2	M.O.	1
3	A.N.M.	6
4	M.P.H.W.	3
5	S.I.	1

All medical and para medical staff was trained for this campaign. Apart from this there was separate staff for supplying vaccine, other logistics related to it and to collect biomedical waste from every booth from time to time. All these activities were supervised and monitored by the team of Community Medicine Department of B. J. Medical College, Ahmedabad and Quality Assurance Medical Officers of Health department. The details of vaccination are shown in table 4 and 5.

**Table 4 : First round data of Mass Immunization Program in Modasa Town,  
Date of Vaccination : 23/2/09 to 25/2/09**

Sr. No.	Days	Pediatrics Beneficiaries	Adult Beneficiaries	Total Beneficiaries
1	First day	11908	43949	55857
2	Second day	2311	12596	14907
3	Third Day	886	2942	3828
Total		15105	59487	74592

**Table 5 : Second round data of Mass Immunization Program in Modasa Town,  
Date of Vaccination: 22/3/09 to 25/3/09**

Sr. No.	Days	Pediatrics Beneficiaries	Adult Beneficiaries	Total Beneficiaries
1	First day	11353	45634	56987
2	Second day	560	2417	2977
3	Third Day	238	1097	1335
4	Fourth Day			273
Total		12151	49148	61572

Table 4 and 5 depicts first and second round coverage of Hepatitis B immunization in Modasa town. Up till now two rounds are over and third round is planned in first week of May, 2009 due to administrative reason.

Due to awareness, mass public health actions, administrative as well as legislative (legal) actions with scientific approach, considerable success has been achieved to control this epidemic. However, following measures needs to be considered to prevent this deadly infection.

- Hepatitis B vaccination (to be included in Expanded Program of Immunization)
- Universal Safety Precautions (Safe Injection Practices)
- Screening of blood and blood product to ensure blood safety
- Prevention of mother to baby transmission

## References

1. World Health Organization. Hepatitis B vaccine - making global progress. EPI update, October, 1996.
2. WHO/CDS/CSR/LYO/2002.2: Hepatitis B, World Health Organization, Department of Communicable Diseases Surveillance and Response.
3. John TJ. Hepatitis B immunization. Indian Pediatrics, 1995; 32: 609- 613.
4. Ajay Kumar Jain, S.K. Mittal, S. Ramji and A. Chakravarti. Hepatitis B Vaccine in the EPI Schedule, Indian Journal of Pediatrics, 2005; 72: 661-665.

5. John D. Snyder and Larry K. Pickering. Viral Hepatitis. In Behrman RE, Kleigman RM, Nelson WE, eds. Nelson Textbook of Pediatrics, 16th edn. Harcourt Asia PTE, Ltd 2000; 771-773.
6. World Health Organization. Immunization Policy WHO/EPI/ GEN/95.3, 1995.
7. Expanded Programme on Immunization: Framework for evaluating a vaccine for the EPI. WHO Document WHO/EPI/ GEN/93.5; 1993.

## Acknowledgement

We sincerely thank Dr. Amarjeet Singh, Commissioner of Health, Medical Services and Medical Education, Govt. of Gujarat for documentation of this event. We are also grateful to Dr. Paresb Dave, Additional Director,(Health), Dr. S. J. Gandhi, Joint Director (Epidemic), Dr. Meena, Quality Assurance Medical Officer, Commissionerate of Health, Medical Services and Medical Education, Gandhinagar.

We thank and acknowledge the support and co-operation of the team members Dr. M. F. Patel, CDHO, Dr. A. K. Bhati, EMO, Dr. Mishra, MO of Sabarkantha district.

We are also thankful to Dr. Pradeep Kumar, Professor and Head, Dr. Geeta Kedia, Professor, Dr. A. Bhagyalaxmi, Associate Professor, P & S M, B. J. Medical College, Ahmedabad for their guidance in preparing this document.



# A Study of Multidrug Resistant Organisms at Civil Hospital, Ahmedabad.

M. H. Patel\*, S. T. Soni\*, M. M. Vegad\*\*

## ABSTRACT

Resistance to antimicrobial agents are commonly seen in gram-negative bacilli, *Staphylococcus* & *Enterococcus*. We document here the prevalence of multidrug resistant organism isolated from patients attending Civil Hospital, Ahmedabad (CHA) in year 2008. Out of 7404 isolates, 2469 (33.3 %) *E.coli*, 1371 (18.5 %) *Klebsiella*, 1350 (18.2 %) *Staphylococcus*, 1325 (17.9 %) *Pseudomonas aeruginosa*, 129 (1.7 %) *Enterococcus* were found. Out of these isolates, 68.9% gram-negative bacilli were extended spectrum  $\beta$ -lactamase (ESBL) positive, 17.3 % *Staphylococcus* were methicillin resistant, 8.4 % of gram-negative bacilli were Inducible  $\beta$ -lactamase positive and 3.8 % of non fermenter gram-negative bacilli were metallozyme positive. Vancomycin resistant *Staphylococcus* & *Enterococcus* were not found. Hospital infection control programme and stringent protocol such as Antibiotic policy are mandatory to curb these microbes in Civil Hospital, Ahmedabad.

**Key words :** Multi-drug resistant organisms, Antimicrobial agents, Beta-lactamase.

## Introduction

Microbes (bacteria, fungi, parasites and viruses) cause infectious diseases, and antimicrobial agents have been developed to combat the severity and spread of many of these diseases. The emergence of resistance to these drugs is a natural biological phenomenon. The use of an antimicrobial for any infection, in any dose and over any time period, causes a "selective pressure" on microbial populations. Under optimal conditions, the majority of the infecting microbes are killed and the body's immune system can deal with the rest. However, if a few resistant mutants exist in the population under selective pressure and the treatment is insufficient or the patient is immunocompromised, the mutants can flourish. Thus treatment may fail resulting in prolonged illness and greater risk of death.<sup>1</sup> This provides greater opportunities for the resistant strain to spread. The emergence of resistance to these "wonder drugs" is now so widespread that it threatens to undermine or even reverse these gains.<sup>2</sup> Today, when a resistant strain emerges, it is not necessary to find a new "wonder drug" ready on the shelf. Thus, multidrug resistant organisms are a growing threat to public health, especially in healthcare settings. Over 70% of the bacteria causing hospital-acquired infections are resistant to at least one

of the most commonly used antimicrobials. The commonly found multidrug resistant organisms are as follows:

- **Methicillin resistant *Staphylococcus* (MRS)** are resistant to all  $\beta$ -lactam antimicrobial agents including penicillins, cephalosporins, carbapenems, monobactams & combinations of  $\beta$ -lactamase inhibitors due to change in penicillin binding protein<sup>2</sup> (PBP<sup>2</sup>). The drug of choice for these organisms is limited to glycopeptides (vancomycin & teicoplanin), oxazolidones (linezolid), newer tetracycline (tigecycline) and rifampin.
- **Vancomycin resistant *Enterococcus* (VRE) & *Staphylococcus aureus* (VRSA)** are sensitive to only linezolid, tigecycline, quinupristin & dalfopristin.<sup>3</sup>
- **Extended spectrum  $\beta$ -lactamase (ESBL) producing *E. coli*, *Klebsiella* etc.** are resistant to all penicillins, cephalosporins & monobactams but are sensitive to the combination of  $\beta$ -lactam +  $\beta$ -lactamase inhibitors and carbapenems.<sup>4</sup>
- **Metallo  $\beta$ -lactamase (MBL) producing non fermenters like *Pseudomonas aeruginosa*, *Acinetobacter* etc.** are sensitive to only  $\beta$ -lactam monobactam (Aztreonam).
- **Inducible  $\beta$ -lactamase (Amp C)** are common in SPICE group (*S. Serratia*, *P. Pseudomonas aeruginosa*, *I. Indole positive Proteus*, *C. Citrobacter*, *E. Enterobacter*). They are sensitive to only  $\beta$ -lactam-carbapenems (imipenem/meropenem).

\* Assistant Professor,

\*\* Professor and Head, Microbiology,  
B. J. Medical College, Ahmedabad

Variable resistance pattern is observed in fluoroquinolones, aminoglycosides, macrolides and tetracycline in the above mentioned mechanism of resistance.

- **Multi drug resistant tuberculosis (MDR TB)** is resistant to first line anti-tubercular drugs- rifampicin and isoniazid.
- **Extensive drug resistant tuberculosis (XDR TB)** - MDR TB when shows resistance to fluoroquinolones and at least one of three injectables drugs like amikacin, kanamycin and capreomycin.<sup>5</sup>
- Chloroquine resistant malaria is global challenge for community. In retrovirus, Anti viral drug resistance is emerging & it's a major concern to NACP - III. In yeast, *Candida non albicans* are becoming more prevalent & resistant to a very common antifungal drug - Fluconazole.<sup>2</sup> Considering the magnitude of the problem, the present study was undertaken to find out the pattern of multidrug resistance at CHA.

## Materials & Methods

A total of 7404 bacteria isolated in year 2008 from clinical specimens were used in the study. The isolates were confirmed by the biochemical reactions. They were

tested for antimicrobial susceptibility by modified Kirby Bauer Method with recommended antibiotics by Clinical and laboratory standard Institute (CLSI) for gram-positive and gram-negative bacteria. Zone of the inhibitions were measured & interpreted as per CLSI guidelines. Isolates were screened for various mechanism of resistance.<sup>6</sup>

**MRS** - Resistance to oxacillin 1 microgram

**VRE** - Resistance to vancomycin 30 micrograms.

**ESBL Positive** - Resistance to antibacterials (cefotaxime 30 micrograms, ceftazidime 30 micrograms, ceftriaxone 30 micrograms, aztreonam 30 micrograms) & sensitive to (ampicillin/sulbactam 20 micrograms & piperacillin / tazobactam 110 micrograms).

**Metallozymes Positive** - Resistance to (meropenem/ imipenem 10 micrograms) & sensitive to (aztreonam 30 micrograms).

**Inducible  $\beta$ - lactamases(Amp C)Positive**- Resistance to these antibacterial (cefoxitin 30 micrograms, cefotaxime 30 micrograms, ceftazidime 30 micrograms, ceftriaxone 30 micrograms, ampicillin / sulbactam 20 micrograms and piperacillin tazobactam 110 micrograms) and sensitive to (meropenem/ imipenem 10 micrograms).

## Results

**Table 1. Prevalence of Bacterial isolate from Civil Hospital, Ahmedabad - 2008**

Organism	Number of isolates	% of isolate
<i>Acinetobacter sp.</i>	225	3.0
<i>Candida sp.</i>	156	2.1
<i>Citrobacter sp.</i>	6	0.1
<i>Escherichia coli</i>	2,469	33.3
<i>Enterococcus sp.</i>	129	1.7
<i>Klebsiella sp.</i>	1,371	18.5
<i>Pseudomonas aeruginosa</i>	1,325	17.9
<i>Proteus sp.</i>	188	2.5
<i>Staphylococcus aureus</i>	452	6.1
<i>Staphylococcus, coagulase negative</i>	898	12.1
Others	185	2.5
Total	7404	100



**Table 2. Prevalence of mechanism of resistance of bacterial isolates from Civil Hospital, Ahmedabad - 2008**

Organism	Number of isolates	% of isolate
Gram negative bacilli	5584	
ESBL positive	3847	68.9
ESBL negative	1737	31.1
Non fermenter gram-negative bacilli ( <i>pseudomonas, acinetobacter etc.</i> )	1550	
Metallozyme positive	58	3.8
Metallozyme negative	1492	96.2
Gram negative bacilli	5584	
Inducible $\beta$ - lactamase positive	469	8.4
Inducible $\beta$ - lactamase negative	5115	91.6
<i>Staphylococcus</i>	1350	
Methicillin resistant	233	17.3
Methicillin sensitive	1117	82.7

- Vancomycin resistant *Staphylococcus* & *Enterococcus* were not observed.

## Discussion

Resistance to the most potent antibacterial has recently extended to members of the *Enterobacteriaceae* family, including hospital-associated strains of *Klebsiella*, *Escherichia coli* and *Enterobacter*. Multidrug-resistant *Pseudomonas aeruginosa* and *Acinetobacter* are the best-known therapeutic challenges among the gram-negative bacteria.<sup>4</sup>

Until recently, carbapenems, such as imipenem, were almost uniformly active against resistant gram-negative organisms, but some strains have now developed effective ways to deal with the carbapenems, including the production of  $\beta$ -lactamases (designated carbapenemases) that demolish the carbapenems. The situation is further complicated by the fact that the resistance mechanisms also affect other classes of antibacterials (e.g., quinolones, aminoglycosides, tigecycline). Moreover, the common presence of these  $\beta$ -lactamase genes of gram-negative bacteria in transferable mobile elements means that these genes could reach virtually any gram-negative bacterium and become a major threat in the future. Recognition of the presence of a carbapenemase in a gram-negative organism is of paramount importance, since strict infection-control measures are required to avert hospital epidemics and the dissemination of these genes to other gram-negative species.<sup>5</sup>

The accurate & early detection of Methicillin resistance in *Staphylococcus* is of key important in the treatment and prognosis of infection, as few antibacterial are effective against them.

Faced with this gloomy picture, 21st-century clinicians must turn to compounds developed decades ago and previously abandoned because of toxicity. The resurrected polymyxins (colistin with or without rifampin) are often the only available alternative for some pan-resistant gram-negatives, particularly *Acinetobacter* & *Pseudomonas aeruginosa*.

## Recommended line of empirical therapy based on antibiogram study :

**Urinary tract infection:** Common isolates are gram-negative bacilli, hence ampicillin + sulbactam / amoxycillin + clavulanic acid and third generation fluoroquinolones (levofloxacin, gatifloxacin, moxifloxacin)

**Lower respiratory tract infection :** Common isolates are gram-negative bacilli, hence cefoperazone + sulbactam, aminoglycoside, and third generation fluoroquinolones (levofloxacin, gatifloxacin, moxifloxacin)

**Blood stream infection :** Common significant isolates are gram-negative bacilli, hence cefoperazone + sulbactam, aminoglycosides, and third generation fluoroquinolones (levofloxacin, gatifloxacin, moxifloxacin)

**Skin & Soft tissue infection:** Gram-negative bacilli & gram-positive cocci both are equally prevalent, hence culture & sensitivity is essential. Even though broad spectrum antibacterial like ampicillin + sulbactam / amoxycillin + clavulanic acid and third generation fluoroquinolones (levofloxacin, gatifloxacin, moxifloxacin).

If patient does not responding to the antibacterial as per culture report, fungal pathogens are suspected.

### Conclusion

It is more difficult than ever to eradicate infections caused by antibiotic-resistant "superbugs," and the problem is exacerbated by a dry pipeline for new antimicrobials with bactericidal activity against gram-negative bacteria and enterococci. A concerted effort on the part of academic researchers and their institutions, industry, and government is crucial if humans are to maintain the upper hand in this battle against bacteria - a fight with global consequences.

*"It is better to spend money in diagnosis of infection rather than costly empirical antimicrobial agent!"*

### References :

1. Diep BA, Gill SR, Chang RF, et al. Complete genome sequence of USA300, an epidemic clone of community-acquired methicillin-resistant *Staphylococcus aureus*. *Lancet* 2006; 367:731-739.
2. Arias CA, Murray BE. Emergence and management of drug-resistant enterococcal infections. *Expert Rev Anti Infect Ther* 2008; 6: 637-655.
3. Nosocomial spread of Linezolid resistant, vancomycin resistant *Enterococcus faecium*. *NEJM* 2009; 34: 867 - 869.
4. Pitout JD, Laupland KB. Extended - spectrum  $\beta$  - lactamase - producing *Enterobacteriaceae*: an emerging public-health concern. *Lancet Infect Dis* 2008; 8:159-166.
5. Training of trainers on ART & RNTCP; page no 20 based on NACO guidelines.
6. Clinical Laboratory Standard Institute / NCCLS performance STANDARDS FOR Antimicrobial disc diffusion tests; Approved standards, 9<sup>th</sup> ed. CLSI Document M2-9. Wayne Pa: Clinical standard laboratory Institute; 2004.

**With Best Compliments**

**From *CIPLA***

**Makers of,**

***EGI***

***RABICIP FAST***

***FORACORT***

***MAXIFLO***



# Seminal Vesicle Sparing Laparoscopic Radical Prostatectomy Using A Low-Energy Source: Better Continence And Potency

Shrenik J. Shah\*\*\*, Ketan D. Desai\*\*\*\*, Ketan Shukla\*\*, Rajesh Sachar\*, V. Goyal\*, A. Nath\*, N. Jain\*, K. Kapadia\*, S. Bajaniya\*

## ABSTRACT

**Objectives:** Ongoing with the newer developments in laparoscopic radical prostatectomy (LRP), we report our experience in a consecutive series of 42 patients with a mean 18-month follow-up. We also studied the use of a low-energy source, especially in the region of the prostatic apex and the neurovascular bundle and evaluated its outcome on continence and potency.

**Methods :** Between November 2003 and March 2009, 56 patients aged 50-80 yrs underwent LRP with vesicourethral anastomosis. Out of these, 42 patients with minimum follow-up of 3 months were selected for the study. Of these, the initial 16 patients were operated by the routine method and the 26 patients operated in the later part of our experience were operated upon using a minimal energy source.

**Results :** The mean follow-up was 18 months (range 3-60). Continence was evaluated at 1, 3, 6, and 12 months. Eleven of the 16 patients in Group I were continent as compared with 21 of 26 patients in Group II. The difference in continence rates was mainly due to less use of electrocautery and harmonic scalpel at the bladder neck. Of the eight patients who were potent pre-operatively in Group I, four remained potent 3 months after LRP. In Group II, 20 of the 26 patients were potent pre-operatively and 16 remained potent 3 months after LRP.

**Conclusion :** Use of a low-energy source at the bladder neck and neurovascular bundle, sparing of seminal vesicle, and leaving behind a long, healthy stump of the urethra during apical dissection, is associated with better continence and potency without compromising oncological outcome.

## Introduction

The first laparoscopic radical prostatectomy (LRP) was performed in 1997 by Schuessler *et al.*<sup>1,2</sup> Since then, LRP has been reported widely and it has become increasingly important as a treatment for localized carcinoma of the prostate. Two large early series originated in France and LRP has since been described in large series (greater than 50 cases) from Germany, Belgium, Japan, the United Kingdom, the United States, and Italy. Cumulatively, well over 3000 procedures have been published worldwide using various techniques, surgical approaches, surgical and robotic instruments. Several other centres are performing LRP with newer technical variations. Gradually, this is leading to a

refinement of the techniques. However, the ongoing debate regarding better continence and potency preservation is still going on. We present our initial experience of LRP with the classical transperitoneal technique. We also compared the results of surgery in Group I (16 cases), performed in the initial part of our series between November 2003 and March 2007 using the routine technique, with Group II (26 cases), performed in the latter half of our experience between April 2007 and August 2008 using a low-energy source.

## Materials and Methods

From November 2003 to March 2009, a total of 56 cases of radical prostatectomy were operated by the laparoscopic technique. Of these, 42 patients with a minimum follow-up of 3 months were

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

selected for the study. The initial 16 patients were operated with the routine technique and 26 patients operated in the latter part (Group II) were operated using a minimal energy source. Both groups were largely similar with respect to mean patient age, Gleason score, general co-morbid conditions, and 'T' stage.

## Procedure

An inverted U-shaped anterior peritoneotomy incision is placed using a hook electrode cautery. The bladder is then dissected off of the anterior abdominal wall, allowing access to the space of Retzius. The endopelvic fascia is incised, exposing the lateral margins. Puboprostatic ligaments are excised. The dorsal vein complex (DVC) is exposed and dissected all around the (DVC), allowing placement of a suture ligature around the DVC for hemostasis. The bladder neck is incised and the incision is carried out all around the bladder neck. Finally, the urethra is transected at the apex of the prostate, leaving behind an adequate length of membranous urethra. Urethrovesical anastomosis is then performed using a 3-0 polyglactin suture with interrupted stitches. In the later part of our experience (Group II), we were specifically careful in our dissection of the region of the bladder neck and the neuromuscular bundle. We also spared the tips of the seminal vesicle, which are closely related to the pelvic nerves



**Fig. 1 : Intra operative photograph sparing seminal vesicle**

We used sharp dissection with scissors in this region and reserving pin point sharp cautery to control any bleeding vessels in this region. Thus, a minimal energy source was used in this dissection. Besides this, a healthy urethra was preserved during apical dissection [Figures 2 and 3].

All patients in their postoperative period were administered IV antibiotics and analgesics as per the requirement. All patients were mobilized on the first postoperative day. Patients were discharged as soon as they were comfortable on a per urethral catheter. Pericatheterogram is performed on the 10th postoperative day. In case the anastomosis was healthy, the per urethral catheter was removed. Otherwise, the per urethral catheter was kept for one more week and removed before checking the anastomosis radiographically. The groups were compared according to operating room time, estimated blood loss, transfusion rate, conversion rate, complication profile, catheter days, hospital stay, continence, and erectile function (Table 1 and 2).

**Table 1 : Patient's profile in the groups for radical prostatectomy using different method**

	<b>Group I</b> (Routine method)	<b>Group II</b> (Minimal source energy)	<b>Total</b>
No. of patients	16	26	42
Patients' age range	52-73	50-80	50-78
Gleason range	5-8	5-7	5-8
Prostate volume (gms.)	15-70	20-50	15-70



**Table 2 : Comparison of operative and post-operative characteristics in the groups for radical prostatectomy using different method**

Parameter	Group I (n = 16) (Routine method)	Group II (n = 26) (Minimal source energy)
Mean operating time in minutes (range)	231 (200-270)	218 (18-250)
Median blood loss in mL (range)	890 (800-1200)	920 (600-1058)
Average transfusion units (range)	1.56 (0-4)	1.60 (0-5)
Conversion to open	4/16	2/26
Rectal injury	2/16	1/26
Hospital stay in days (range)	4.25 (3-12)	4.71 (3-9)
Continence at 3 months	11/16	21/26
Potency	4/8	16/20



**Fig. 2 :** Post-operative photograph of the incision length and port site.

## Results

The mean operative time for Group I (routine LRP) was 231 min and for Group II (LRP with low-energy usage) was 218 min. The median blood loss in Group I was 890 ml and in Group II was 920 ml. However, the average transfusion requirement (allogenic) was 1.56 units in Group I and 1.60 units in Group II, which is not statically significant.

Conversion to open surgery due to bleeding or rectal injury was 25% (4/16) in Group I and 7.6% (2/26) in Group II. Incidence of rectal injury in Group I was two patients, 12.5% (2/16), and in Group II was 3.8% (1/26). All patients with rectal injury were diagnosed intra-operatively and converted to open procedure and the injury was repaired in two layers and a rectal drain was placed for 5 days postoperatively. No incidence of delayed rectal leakage was seen in any of the three cases. Patients were kept in the hospital till the patients were

ambulatory and felt fit enough to go home. In Group I, the hospital stay was 4.25 days, with one patient of rectal injury staying up to 12 days due to sub acute intestinal obstruction. This was not statically different for the average hospital stay of 4.71 days in Group II. Continence was evaluated at 1, 3, 6, and 12 months. Eleven of the 16 (68.7%) patients in Group I were continent as compared with 21 of the 26 (80.7%) patients in Group II. In Group I, only eight patients of the 16 were potent pre-operatively and four (50%) of them remained potent 3 months after LRP. In Group II, 20 of the 26 patients were potent pre-operatively and 16 (80%) remained potent 3 months after LRP.

## Discussion

The mean operative time for Group I (routine LRP) was 231 min and for Group II (LRP with low-energy usage) was 218 min. Moreover, the slight increase in duration in Group I may be due to the learning curve and also the increased number of rectal injury in Group I.

The median blood loss in Group I was 890 ml and in Group II was 920 ml. The median estimated blood loss was slightly higher in Group II with less use of electrocautery and harmonic scalpel. Higher blood loss was also expected as a part of the procedure due to vigorous use of scissors and sharp dissection in Group II. However, the average transfusion requirement (allogenic) was 1.56 units in Group I and 1.60 units in Group II. Conversion to open surgery was 25% (4/16) in Group I and 7.6% (2/26) in Group II. No increases in the conversion rate were seen in Group II despite sharp



dissection and slight increase in bleeding. The reason for open conversion was either rectal injury or bleeding in most cases. One case had to be converted to open surgery due to difficulty in dissection at the apex. Incidence of rectal injury in Group I was two patients, 12.5% (2/16), and in Group II was 3.8% (1/26). Patients were kept in the hospital till patients were ambulatory and felt fit enough to go home. In Group I, the hospital stay was 4.25 days, with one patient of rectal injury staying up to 12 days due to sub acute intestinal obstruction. This was not statistically different for the average hospital stay of 4.71 days in Group II. Continence was evaluated at 1, 3, 6, and 12 months. Eleven of the 16 patients (68.7%) in Group I were continent as compared with 21 of the 26 (80.7%) patients in Group II. The difference in the continence rates was mainly due to less use of electrocautery and harmonic scalpel at the bladder neck, sparing of seminal vesicle, and preservation of the healthy urethra during dissection. Sharp dissection and less use of electrocautery and harmonic scalpel causes lesser damage to the nerves in the vicinity of the neurovascular bundle and also helps in better preservation of the external sphincter at the neck. In Group I, only eight of the 16 patients were potent pre-operatively and four (50%) of them remained potent 3 months after LRP. In Group II, 20 of the 26 patients were potent pre-operatively and 16 (80%) remained potent 3 months after LRP. The erectile function is better in Group II. The patient population in our study is small. Therefore, longer follow-up and studies including larger population of patients are required to evaluate the same.



**Fig. 3 :** Post-operative specimen of the prostate.

### Conclusion

The benefit of SV preservation is to lower the probability of damage to the pelvic plexus and the blood supply to the cavernous bodies.<sup>8</sup> There are isolated, small, nonrandomized series of patients who underwent SV sparing and investigators have typically reported better than expected outcomes for urinary and erectile function.<sup>4, 5, 6, 7</sup>

Since its inception by Schuessler *et al.*<sup>1, 2</sup> in the early 1990s, LRP has gained tremendous popularity and widespread implementation at specialized centers worldwide. LRP represents a technically demanding laparoscopic procedure, but it can be performed systematically with standard techniques. Meanwhile, the constant effort to improve upon the technique to attain better results is still on in the urological community world over. In the same context, our initial observation that the use of a low-energy source at the bladder neck and the neurovascular bundle, sparing of seminal vesicle, and preservation of the healthy urethra during dissection is associated with better continence and potency is encouraging. Nevertheless, longer follow-up and more mature data are needed definitively to establish the fact.

### References

1. Schuessler WW, Schulam PG, Clayman RV, et al. Laparoscopic radical prostatectomy: initial short-term experience. *Urology* 1997; 50: 854-857.
2. Guillonneau, B. and Vallancien, G.: Laparoscopic radical prostatectomy: the Montsouris experience. *J Urol* 2000;163: 418.
3. Zlotta AR, Roumeguere T, Ravery V, Hoffmann P, Montorsi F, Turkkeri L et al: Is seminal vesicle ablation mandatory for all patients undergoing radical prostatectomy? A multivariate analysis on 1283 patients. *Eur Urol* 2004; 46: 42.
4. Shidham VB, Lindholm PF, Kajdacsy-Balla A, Basir Z, George V and Garcia FU: Prostate-specific antigen expression and lipochrome pigment granules in the differential diagnosis of prostatic adenocarcinoma versus seminal vesicle-ejaculatory duct epithelium. *Arch Pathol Lab Med* 1999; 123: 1093.
5. Bellina M, Mari M, Ambu A, Guercio S, Rolle L and Tampellini M: Seminal monolateral nerve sparing radical prostatectomy in selected patients, *Urol Int* 2005; 75: 175.
6. John H and Hauri D: Seminal vesicle-sparing radical prostatectomy: a novel concept to restore early urinary continence. *Urology* 2000; 55: 820.
7. Sanda M, Dunn R, Wei J, Resh J and Montie J: Seminal vesicle sparing technique is associated with improved sexual HRQOL outcome after radical prostatectomy. *J Urol*, suppl 2002; 167: 151.



# Comparisons of Post Operative Recovery Pattern in Minimal Access vs Open Anterior Thoracic Spine Surgery.

M.M. Prabhakar\*, Himanshu C. Panchal\*\*

## ABSTRACT

Reconstruction of anterior column of thoracic and thoraco lumbar region for trauma, tumor or post infective spine with conventional thoracotomy or thoraco-phreno-lumbotomy have additional iatrogenic trauma at the lateral chest wall and abdominal wall, may some time ends up with post thoracotomy syndrome. The minimal access anterior thoracic or thoraco lumbar approach opens up the whole thoraco lumbar junction to mid thoracic spine to perform all the procedure required for reconstruction of anterior column of spine like, debridement, decompression, corpectomy and anterior fusion of motion segments. The thoraco lumbar region is approached by partial detachment of diaphragm from thoracotomy.

We present the initial recovery pattern in 36 patients having trauma or tuberculosis of thoracic spine operated with open or minimal approach at our institute at B.J Medical College and Civil Hospital, Ahmedabad. 22 men and 14 women with average age 32 yrs. were included in study. 17 patients were having traumatic spine injuries and 19 were having tuberculosis. The initial evaluation found early recovery, less morbidity, less blood loss, less postoperative pain and comparatively good lung compliance.

**Key words :** Anterior reconstruction, Minimal access thoracic spine, Spine trauma, Spinal tuberculosis

## Introduction

Posterior stabilization is gold standard for stable spinal column fracture alone but for unstable fracture anterior column reconstruction is primary principle of treatment. Same way debridement and reconstruction of diseased spinal column with tuberculosis is main stay for treatment of Koch's spine. The classical open thoracotomy and thoraco-phreno-lumbotomy approach perfectly expose the thoracic and thoraco lumbar region. At the same time they also causes extensive additional trauma to the lateral chest wall and abdominal wall including the thoracic cage. Development of endoscopic technique has made it possible to approach anterior part of thoracic, lumbar and thoraco lumbar spine using minimal invasive technique (Figure 1).<sup>1, 2</sup> Thus complete or partial resection of vertebral body, mono segmental or multi segmental fusion, decompression of spinal canal, debridement of diseased vertebral body and reconstruction of anterior spinal column can be performed quite efficiently with some modification in

surgical instruments with minimal access. Initially the endoscopic approach was used quite efficiently for thoracic discectomy and anterior release of concave curves by minimal approach.<sup>3</sup>



**Figure 1 :** Minimal invasive spine instruments with video assisted telescope for better visualization

\* Director, Government Spine Institute, Prof. and Head,

\*\* Assistant Professor, Orthopedics,  
B. J. Medical College, Ahmedabad.

## Materials and Methods

This study is retrospective hospital based comparative analysis of minimal access anterior spinal approach with open thoracotomy approach, at the Department of Orthopedics, B.J. Medical College and Civil hospital Ahmedabad, India. The analysis included patient operated for mid thoracic to thoraco lumbar junction with unstable spinal fractures and tuberculosis of spine with minimal access from August 2007 to March 2009. We compared the early outcomes of the minimal access anterior thoracic surgeries with conventional open approach to evaluate the post operative recovery pattern and morbidity of approach (Figure 2). The procedure carried out were partial or complete resection of vertebral body to decompress the spinal canal and reconstruction with bone graft and cage, abscess drainage for tuberculosis spine, debridement decompression and reconstruction of diseased vertebral body with bone graft and cage.



**Figure 2 :** Open thoracotomy approach showing rib resection and large exposed thoracic cavity

The preoperative planning and preparation was same as conventional thoracotomy for each patient. All patients were operated before with posterior instrumentation with heartshil rectangle or mossmiami pedicular system. General anesthesia was given to the patient with double lumen endotracheal tube and was positioned in right lateral position. After complete surgical isolation of incision site and level of body was marked with fluoroscopy and a retractor system (Synframe) was attached to the table. Incision of about 5 cm size was made at pre marked site over rib, and segment of rib was resected. If the patient's thoracic profile is large then rib resection can be avoided and only through intercostals space thoracic cavity can be approached. Thorax was open and lung was retracted away from spine. With separate incision in anterior axillary line a 30 degree 10 mm thoraco-scope was introduced for proper visualization (figure 3).<sup>4, 5</sup>



**Figure 3 :** Minimal access thoracotomy, showing special retractor system to access the thoracic cavity through small incision.

The self retaining Synframe was assembled to retract soft tissue. Lung and diaphragm were pushed with help of long blades of Synframe and the operative area was isolated from rest of thoracic structure. Segmental vessels were safely dissected and homeostasis was achieved with long hemostat coagulation probe (Figure 4). The haemostatic clips were also used for this purpose.<sup>6</sup>



**Figure 4 :** Closer view of the system showing direct approach to spine after retracting lung and other soft tissue.

Modified longer version of instruments was used for endoscopic spine surgeries. Three patients were operated with conventional thoracoscopy approach. Four portals were used for abscess drainage and local debridement of disc space with tuberculous spine. Anterior reconstruction was done with rib grafts or cage filled with cancellous bone graft. Chest drain was kept from the scope site portal so no extra incision was required for placing drain. Closer was done in layers as conventional thoracotomy.

## Results

36 patients were included in the study. Posterior stabilization with mossmiami Pedicular system or heartshil rectangle and sub laminar wires was done. All patients were operated in two stage surgeries having posterior fixation always first.



**Table : 1 Details of patients with different surgical approach**

Pathology	Open approach	Minimal invasive	Total
Traumatic injuries	10	07	17
Tuberculosis	10	09	19
Total	20	16	36

**Table : 2 Comparison of parameters in patients operated with open vs minimal invasive approach in thoracic spine surgery**

Parameters (n=20)	Open approach (n=16)	Minimal invasive
Mean surgery time (mins.)	150	170
Mean Blood loss (ml)	800	350
Pain score by Visual analogue scale on 5th day	88.6	62.2
Pain score by Visual analogue scale on 15th day	73.4	36.8

Table 2 shows parameters taken for assessment for both the approaches. Mean time taken for open surgery was 150 mins. and blood loss was 800 ml, while with minimal approach the time taken was 170 mins. and blood loss was 350 ml average.

Visual analogue score (VAS) was assessed on fifth day and 15<sup>th</sup> day of surgery for pain score.<sup>7</sup> On fifth day of surgery patients operated with open approach had average pain score 88.6 and with minimal invasive approach was 62.2.

On 15<sup>th</sup> day the VAS was again assessed and it was 73.4 and 36.8 for open and minimal approach respectively.

## Discussion

Conventional open thoracotomy approach is very morbid approach and dissection of the intercostals space and resection of large rib segment will lead to loss of lung compliance, decreased vital capacity and increased morbidity. We operated 16 patients with minimal access and in comparison we included 20 patients with open

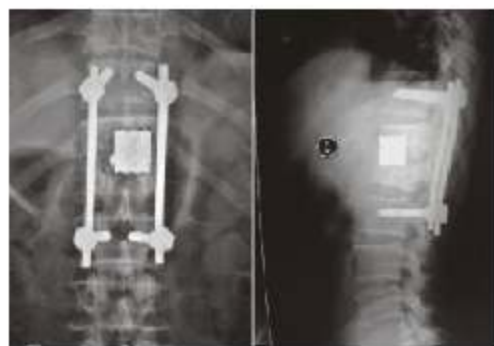
thoracotomy approach of total 36 included in study. Out of 36 there were 22 male and 14 female patients. 19 were having tuberculosis of spine, and 17 patients were having traumatic injury in the territory from D-5 to D12 level. We did not include patient with lumbar injuries which required extensive dissection around diaphragm to approach L1 level with minimal access.

Average time for open technique was 150 mins. and for minimal invasive was 170 mins which in comparison is not counted very higher. Peri-operative blood loss with open technique was average 800 ml and with minimal access patient was average 350ml. This shows the more of blood loss is related to approaching the spine than main spinal procedure. In spite of long surgical time approach related blood loss can be reduced by minimal invasive techniques quite efficiently.

Post-operative pain was accessed by VAS score and found to be much better with minimal approach than open technique in first five days of surgery. On 15<sup>th</sup> day the pain score was again evaluated which improved from 62.2 to 36.8. Open thoracotomy has pain score on 5th day 88.6 and on 15<sup>th</sup> day 73.4, this shows comparative morbidity in post operative recovery period

and with open technique this is quite longer than minimal invasive technique. The pulmonary function improved with minimal invasive approach than open technique after having all patients PFT done on 2<sup>nd</sup> and 5<sup>th</sup> day of surgery.<sup>8</sup>

All patients had gone for anterior decompression of cord by total or partial corpectomy and then reconstruction was carried out with mash cage filled with bone grafts. None was instrumented anteriorly. The average incision size with minimal invasive was 6.5 cm. As per protocol all patients were sent for postoperative rehabilitation, the patient with minimal approach has started their rehabilitation on average 4<sup>th</sup> day and with open technique had started on 10<sup>th</sup> day because of pain and respiratory compromise. Figure 5 shows post operative x-rays of patient operated with minimal invasive second stage after posterior fixation with pedicle screw system. Reconstruction done with distractable cage filled with bone graft for restoration of anterior and middle column height and curvature of spine.



**Figure 6 :** Post operative x-rays, after anterior surgery, AP and Lateral view showing anterior reconstruction with distractable cage.

## Conclusion

In last two decades endoscopic procedure have become standardized techniques for minimal invasive procedure including spine surgeries. With minimal access it has become possible to approach thoracic and thoraco lumbar region including retroperitoneal segment of the spine. With partial detachment of the diaphragm it has increased indication of spectrum of the minimal access anterior approach substantially, so that it include complete treatment of spinal fractures and diseased vertebral body with infection or tumor. The complication rate of this approach remain at same scale as that are

known for open procedure, with advantages in terms of the reduced access morbidity associated with minimal invasive technique.

## References

1. Khoo LT, Beisse R, Potulski M: Thoracoscopic-assisted treatment of thoracic and lumbar fractures: a series of 371 consecutive cases. *Neurosurgery* 2002; 51 (Suppl 5):104-117.
2. Mack MJ, Regan JJ, Bobechko WP, et al: Application of Thoracoscopic for diseases of the spine. *Ann Thoracic Surg.* 1993; 56: 736-738.
3. Nymberg SM, Crawford AH: Video-assisted Thoracoscopic releases of scoliotic anterior spines. *AORN J* 1996; 63:561-576.
4. Clinical Analysis of Video-assisted Thoracoscopic Spinal Surgery in the Thoracic or Thoracolumbar Spinal Pathologies, Sung Jin Kim, M.D. Moon-Jun Sohn, M.D., Ph.D. Ji-Yoon Ryoo, M.D., Ph.D. Yeon-Soo Kim, M.D., Ph.D. and Choong Jin Whang, M.D., Ph.D. F.A.C.S. *Journal of Korean Neurosurgery Soc.* 2007; 42(4): 293-299.
5. M. J. Mack, J. J. Regan, P.C. McAfee, George P., Ari Ben, Tea E. Acuff, . Video-assisted thoracic surgery for the anterior approach to the thoracic spine .*Thoracic Surg* 1995; 59:1100-1106.
6. McAfee PC, Regan JR, Zdeblick T, et al: The incidence of complications in endoscopic anterior thoracolumbar spinal reconstructive surgery. A prospective multicentre study comprising the first 100 consecutive cases. *Spine* 1995; 20:1624-1632.
7. Knop C, Oeser M, Bastian L, Lange U, Zdehovsky M, Blauth M et al. Development and validation of the Visual Analogue Scale (VAS) Spine Score 2001; 104(6):488-97.
8. Izatt, M T. BPhy, Harvey, J R. Adam, Clayton J. Fender, David; Labrom, R. D. Askinet al. Recovery of pulmonary function following endoscopic anterior scoliosis correction: evaluation at 3, 6, 12, and 24 months after surgery, *Spine* 2006;31(21) 2469-2477.



# Left Molar Approach For Excision of Large Oral Cystic Swelling: Our Experience

Kunjan Joshi \*, Seema Gandhi \*\*, M. I. Shukla \*\*\*, I. A. Chadha\*\*\*\*, B. J. Shah\*\*\*\*\*

## ABSTRACT

Molar approach of laryngoscopy and intubation technique is used for anticipated difficult intubation due to presence of any intraoral mass which anatomically obstructs laryngoscopy or may rupture or bleed on touch. In such situation left molar approach with Macintosh blade along with optimal external laryngeal manipulation is easy, reliable and rewarding for endotracheal intubation. We report a case of large intra oral cystic swelling, admitted to Civil Hospital, Ahmedabad for excision. Laryngoscopy with left molar approach with Macintosh blade along with optimal laryngeal manipulation resulted into successful intubation for surgery.

**Key words :** Intraoral mass, laryngoscopy, Left molar approach, Optimal external laryngeal manipulation

## Introduction

Securing & maintaining a patent airway for intraoral mass or swellings is a great challenge to the anesthesiologist. In such situation, difficult laryngoscopy is encountered more often as intra oral mass encroach and physically occupy the oral cavity thus making glottic visualization, laryngoscopic maneuvering and endotracheal intubation difficult. This can be overcome by using left molar approach using Macintosh blade and optimal external laryngeal manipulation (OELM).

We report a case of intraoral swelling, occupying the whole oral cavity in a 10 years old male child for excision. It was a case of difficult laryngoscopy and intubation. Hence, left molar approach of laryngoscopy with Macintosh blade and optimal external laryngeal manipulation was used to provide a better glottic visualization.

## Case report

A 10 year old male child with 30kg. weight and 140cms. height was asymptomatic before one year. The parents noticed a small cystic swelling on right side of anterior aspect of tongue. Initially, the swelling was small and gradually progressed to the present size. The patient had difficulty in eating & chewing for one month and was admitted to Civil Hospital, Ahmedabad for excision.



**Figure 1 : Patient with large intra oral tumour**

Pre-operative physical examination revealed normal vital parameters. Though he had difficulty in eating; his tongue, nail and conjunctiva were fairly pink. He had good mouth opening with normal teeth, no intra oral structure was visualized. All the investigations were within normal limit except USG tongue showed well defined cystic swelling of 43 x 37 mm size.

The patient was premeditated with Inj. glycopyrrolate 2 mg. i.v., Inj. ondansetron 2 mg. i.v. and Inj. rabeprazole 10 mg. i.v. As the patient was of pediatric age group and not co-operative for awake intubation, he was sedated with Inj. ketamine 30 mg i.v. and Inj. propofol 50 mg. After proper sedation, tongue was caught gently with Magill's forceps and brought outside to the right of the mouth. Conventional Macintosh English profile laryngoscope blade was introduced from the left molar approach to visualize glottis. As epiglottis and glottic opening were visualized with OELM, tracheal intubation was successfully done with ETOPCT 5.5 mm ID with stylet after topical spray with 10% lignocaine. The left-molar approach with OELM significantly improved

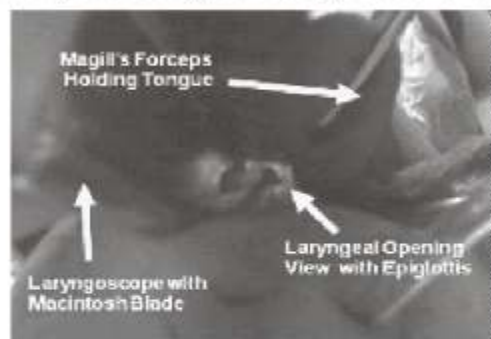
\* Resident  
 \*\* Assistant Professor  
 \*\*\* Associate Professor  
 \*\*\*\* Professor and Head  
 \*\*\*\*\* Dean and Professor Anesthesiology  
 B. J. Medical College, Ahmedabad.



laryngeal view from Grade 3 to Grade 1 (Cormack and Lehane Classification).<sup>1</sup> Bilateral air entry was checked and endotracheal tube was fixed. Oral packing was done with wet roller pack. Swelling was aspirated and then capsule was removed successfully.

## Discussion

Causes of difficult laryngoscopy are multifactorial, but obvious obstacles include maxillary structures such as prominent incisors and an increased volume of tongue remaining anterior to blade. The molar approach of laryngoscopy is reported to improve glottic view in sporadic cases of difficult intubation. A right-molar approach for direct laryngoscopy has been recommended for patients with difficult airways.<sup>2</sup> In these reports, straight laryngoscopic blades were inserted from the right corner of the mouth at a point above the right molars. The only exception is a report by Akdikmen,<sup>3</sup> who recommends introduction of an infant-sized straight blade from the left corner of the mouth at a point posterior to the molar teeth for adult patients with difficult laryngoscopy. The right-molar approach has the advantage that the bulging of tongue over the blade is prevented; the laryngeal view is framed by the laryngoscope and the right side of the patient's mouth. A hockey stick-shaped stylet or assistant's finger is necessary to pull the right corner of the mouth laterally in the right-molar approach.<sup>2</sup> Because this maneuver is essential to make room to manipulate the endotracheal tube, the laryngoscopist cannot bring blade fully to the right side of the mouth.



**Figure 2 : Laryngoscopic view by left molar approach**

The left-molar approach is, on the other hand, able to utilize the maximum effect of molar approach because the laryngoscopist can bring the blade fully to the left side of the mouth. The only drawback of the left-molar approach is the bulging of the tongue over the blade, which may obscure the view of the glottis. In practice, bulging of the tongue did not disturb the direct visualization of the glottis. The line of view of the

laryngoscopist inevitably deviates laterally from the midline in molar approaches. This deviation makes it difficult to align the tip of endotracheal tube with the aperture of the glottis.

According to Dr.Ken Yamamoto, Dr.Tsunchisa Tsubokawa et al<sup>4</sup>, the glottic view in patients with difficult laryngoscopy improved if the Macintosh blade was inserted at a point above the left molars. The Macintosh blade is widely accepted because it enables quick, atraumatic laryngoscopy and lower deviation of line from the ideal line than Miller blade. Even using the Macintosh blade and an optimal sniffing position, however, a direct line of view to the glottis could be prevented, resulting in difficult laryngoscopy. The molar approach reduces the distance from the patient's teeth to larynx and prevents intrusion of maxillary structures into the line of view. In addition a molar approach avoids a large volume of the tongue remaining anterior to the blade, unlike the midline approach. Optimal external laryngeal manipulation is reported to reduce the incidence of difficult laryngoscopy if using Macintosh blade from 9.3. to 5.9 %, 8 to 3 %, or 11.4 to 0.00 %.<sup>5</sup> We confirmed that OELM effectively reduces incidence of difficult laryngoscopy (laryngeal view of grade 3 or grade 4) from 6.5 to 1.97% with midline approach using Macintosh blade. Despite popularity of predictive tests of difficult laryngoscopy such as the Mallampatti score, Wilson risk-sum score and prediction with Indirect Laryngoscopy, they have been associated with unavoidable false positive & false negative. If anesthesiologists encounter an unexpected difficult laryngoscopy, the left-molar approach with OELM provides an easy and reliable option.

## References

1. Cormack RS, Lehane J: Difficult tracheal intubation in obstetrics. *Anesthesia* 1984; 39:1105-11.
2. Henderson JJ: The use of paraglossal straight blade laryngoscopy in difficult tracheal intubation. *Anesthesia* 1997; 52:552-60.
3. Akdikmen SA: A modified technique for direct laryngoscopy and tracheal intubation. *Anesthesiology*, 1966; 27:321.
4. Yamamoto K, Tsubokawa T et al: Predicting difficulty in intubation with indirect laryngoscopy. *Anesthesiology* 1997; 86:316-21.
5. Benumof JL, Cooper SD: Quantitative improvement in laryngoscopic view by optimal external laryngeal manipulation. *J Clin Anesth* 1996; 8: 136-40.



# *Toxoplasma Gondii* in Bone Marrow Aspiration

R. N. Gonsai\*\*\*\*, H. V. Oza\*\*\*, Tarang Kadam\*\*, Purvi Patel\*\*, Neelam Mehta\*

## Introduction

*Toxoplasma Gondii* is a protozoan parasite of the phylum apicomplexa that has a world wide distribution in humans and in domestic and wild animals. Infection in immunocompetent person is generally asymptomatic or mild, but immunocompromised person may experience serious complication. Infection in utero may result in serious congenital infection with stillbirth.

In immunosuppressed especially those with AIDS infections with *T. Gondii* usually present with CNS involvement. Other possible clinical and pathological manifestation includes Pneumonitis, myocarditis, retinitis, pancreatitis or orchitis. In AIDS when CD4 count fall below 200/micro lit, opportunistic infections are seen.

## Case Report

A 22 year male patient was admitted with the complains of fever with chills, abdominal pain, vomiting and dry cough since 7 days. The patient body weight was 43 kg. There was no history of alcohol consumption or tobacco chewing or smoking. Patient was known case of HIV positive since 3 months. The patient had a past history of extra pulmonary TB in 2005 and was treated for 1.5 years.

Hemogram showed pancytopenia with normal RBC indices

ESR - normal range.

RBC-2 million/cm

WBC-970 cells/cm

Platelet-39000 cells/cm

Peripheral smear examination revealed reduced RBC mass with microcytic, hypochromic picture and moderate anisopoikilocytosis. Liver Function test and Renal Function test were normal. 3 units of blood & 1 unit of platelet were transfused. Post transfusion Hemoglobin increased to 10.8 gm% but leucopenia (2030 cells) & thrombocytopenia (45,000) persisted. On USG abdomen, liver was moderately enlarged, spleen was mildly enlarged, multiple tiny hypochoic splenic microabscess/

splenic infiltration, multiple enlarged pre & paraaortic & periportal lymphnodes were found.

Chest x-ray was normal. Due to persistent pancytopenia bone marrow aspiration was advised which showed, few myeloid & erythroid precursors and mildly increased plasma cells were seen. Many scattered extracellular trophozoite form of *toxoplasma gondii* were seen. The bone marrow findings were suggestive of normocytic anemia with pancytopenia with presence of trophozoite of *toxoplasma gondii*.

Later on CSF examination was done which showed *Cryptococcal neoformans*. Stool examination also showed multiple parasites. Finally a case was diagnosed as AIDS with multiple parasitosis.

## Discussion

AIDS is a multisystem disorder affecting immunity of body. As body's ability to fight against infection is reduced, CD4 count is reduced. This leads to increased chance of opportunistic infections. In the present case a known patient of HIV positive for last 3 months developed *T.gondii* and *C.neoformans* opportunistic infections. Diagnosis of toxoplasmosis may be established by examination of tissue, blood or body fluids. Demonstration of tachyzoites or tissue cyst is definitive but may prove difficult to demonstrate in H & E stain system. Fluorescent or immune-peroxidase stain if available is useful. Isolation of organism from blood or body fluid is evidence for acute infection where as recovery from tissue may reflect chronic infection. In smear tachyzoites are crescent shaped or oval measuring approx. 3x7 micro meter; cyst measure up to 30 micrometer and a usually spherical except in muscle fiber where they appear elongated. Serology remains the primary approach to establish a diagnosis of toxoplasmosis. The Sabin-Feldman Dye test & IFA are standard tests. Antibody appears in 1 to 2 week and peak at 6 to 8 weeks.

## References for further reading:

1. Robbins and cotran; Pathologic basis of disease; 7<sup>th</sup> edition; 2007; 256, 351, 1378, 1379.
2. Henry's; Clinical diagnosis and management by laboratory methods; 21<sup>st</sup> edition; 1136, 1137.
3. Wintrobe's Clinical Hematology; 11<sup>th</sup> edition; 2004; 2: 901, 2011.

\* Tutor

\*\* Assistant Professor

\*\*\* Associate Professor

\*\*\*\* Professor and Head Pathology  
B. J. Medical College, Ahmedabad.

## Student's Activities & Achievements

---

Various sports events like cricket, table tennis, chess, and badminton have been successfully organized by the students of B. J. Medical College. For each of these events, an organizing committee is formed and the details are displayed on the notice board. The formats of these tournaments are interesting to suit their study hours and sport activities. The participants play various levels of game and consequently follow up to semi-finals and finals. The winners in each category are awarded in the function organized by students. It's a great fun with building team spirit among the students.

- **Table Tennis Championship'09** was organized between 18<sup>th</sup> - 20<sup>th</sup> March 2009 by Hardik Jadav, Jay Patel, Suchit Dadia. The winners were Dr. Snehal, Arnav, Chintan, Abhish & Vidita, Mruga & Gamit in various category.
- **Chess tournament** was organized by Kumar Mehta (III/III) ,Ketul Puj (III/I), Dhruvit Soni (III/I), Kruti Patel (III/I) from 25<sup>th</sup> of March to 5<sup>th</sup> April 2009. The format was according to Swiss League. A total of 34 students, interns and residents participated. According to the format, each player had played 6 matches. It was a great experience with fun. The finals between Dhaval Shah and Nakul Sulegaon was a marathon match, lasted for 5 hours and was won by Dhaval Shah.
- **'Fun with Cricket'**, a new concept, the shortest, funniest and interesting and exciting ever cricket format of 6 over match, 6 players (2 girls and 4 boys) was organized from 20<sup>th</sup> to 27<sup>th</sup> March 2009. 6 over match, 6 players (2 girls and 4 boys)...in which boys had to bat with wrong hand. Double runs were given to girls. There were various other interesting rules also. It was a big success with more than 50 teams from B.J. Medical College, Dental, Physiotherapy and N.H.L Medical College. The winning teams and performers were awarded prizes on 1<sup>st</sup> April 2009. It was indeed pleasurable to see young budding doctors taking time out of their busy schedules to participate in the event with full zeal. The various winning teams and performers were awarded prizes on 1<sup>st</sup> April 2009.
- First year students Purvi Limdi, Mansi Trivedi, Karan Desai got 3<sup>rd</sup> prize in **"Interstate Physiology Quiz'08"** at P. S. Medical College, Karamsad.
- Resident doctors Kapil Virpariya, Ravish Raval & Piyush Joshi won 2<sup>nd</sup> prize in Medical Quiz at APICON-'09 held at Ghaziabad.
- To pay tribute to the bomb blast victims in a special way **"AATMA - CONCERT"** was organized by our interns known as **'Infants'** on 21<sup>st</sup> March 2009. About 3000 youth from all over the city joined to support the traumatic cause. A blood donation camp was also organized during the show and 25 bottles of blood were collected.





**Inauguration Of MCI platinum Jubilee celebration seminar by Hon'able Chief Minister Shri Narendra Modi and Dr. Ketan Desai**



**Inauguration of 'Cytocon 2008'**



**Inauguration of 'The Candle Lighting Ceremony & the College Day' by Hon'able Health Minister Shri Jay Narayana Vyas at Nursing school.**



**' White coat ceremony'**



**Shraddhanjali to bomb blast victims at college auditorium**



**A tribute to bomb blast victims at AATMA concert**

## Kaleidoscope Of Events



**Renovated reading room for UG students in library**



**Computer Lab in the library**



**Civil Hospital, Ahmedabad**



**O.P.D. building at Civil Hospital, Ahmedabad**



**Donor Screening & Examination : Blood Bank**



**Receiving Sample from wards and processing :  
Blood Bank**



## Kaleidoscope Of Events



**Air-Condition comfort of Special Rooms (G-6 Ward)**



**Nursing Station at recently started G-6 Special Ward**



**Ready to serve : Nursing Staff at Special Room  
Nursing Counter**



**Paediatric Ward : Specially designed and  
equipped for the needs of children**



**Ultra modern Blood Bank with State-of-The  
Art Equipments**



**Chess tournament-The final match**

## Kaleidoscope Of Events



**Dean awarding prize for cricket series**



**Students playing carrom and table tennis at Gymkhana**



**Dr. R. K. Dikshit awarding prize for cricket series**



**Recently renovated badminton court at the college**



**Musical band of interns - *Infants***



**Blood donation camp organized by students**



## Instructions to Contributors

---

### Manuscripts

- Manuscript must be submitted in two hard copies and CD (MS word 2007 format) along with the statement signed by the authors regarding the originality of the article. Soft copy of the manuscript may be mailed to the editors.
- The text must be printed in double spaced, on one side of the A4 size paper with sufficient margin, using Arial font, size 12.
- Text should have title page, with full name of the author(s), designation and affiliations. The corresponding author's address 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.

### 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.

### 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.

### Address for submitting the manuscripts:

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

## \* HEALTH EVENTS' CALENDER \*

JANUARY	FEBRUARY	MARCH
12 - National Youth Day 15 - IMA Community service Day 29 - UNICEF Day 30 - Anti Leprosy Day	28 - National Science Day	8 - International Women's Day 21 - World Forestry Day 21 - Day for Elimination of Racial Discrimination 22 - World Day for Water 24 - World T.B. Day 31 - Measles immunization Day
APRIL	MAY	JUNE
7 - World Health Day 17 - International Hemophilia Day 22 - World Habitat / Earth Day	1 - World Labour Day 7 - World Asthma day 8 - World Red Cross Day 15 - International family day 28 - International Women's Health Day 31 - World Anti-Tobacco Day	5 - World Environment Day 1-7 - Cleanliness Week 14 - World Blood Donor Day 26 - Anti drug abuse day
JULY	AUGUST	SEPTEMBER
1 - Doctors Day 1-7 - Malaria Week 11- World Population Day	1-8 - Breast Feeding Week 6 - Hiroshima (Nuclear Hazard) Day 25 Aug-10 Sep - Eye Care Fortnight	1-7 - Nutrition Week 8 - World Literacy Day 15 - Occupational Health Day 15 - World Peace Day 24 - World Heart Day
OCTOBER	NOVEMBER	DECEMBER
1 - World Anti terror Day 1 - National Voluntary Blood Donation Day 2 - Anti Drug Addiction Day 4-10 - Mental Health Week 10 - World Mental Health Day 16 - World Food Day 20 - Osteoporosis Day 31 - Anti Natural Disaster Day	10 - World Immunization Day 14 - Universal Children's Day 14 - Diabetes Day 14-20 - Newborn Care Week 17 - National epilepsy day 25 - International Women's safety day	1 - Anti AIDS Day 3 - World Handicap Day 10 - Human Right Day 15 - World Energy Saving Day





**“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**



**SEVO***rane*®

SEVOFLURANE

**The one to turn to**

ABBOTT INDIA LTD. MAKERS OF SEVORANE  
(ORIGINAL & PUREST SEVOFLURANE)



With Best Compliments from  
GUJARAT PROHIBITION



**સાવધાન!**  
નશો એ દુઃખનો દાવાનળ છે



આપના કુટુંબના સુખ અને સમૃદ્ધિને  
નશાની લત ભરખી જાય તે પહેલાં....

**નશો  
છોડો**

- નિયામકશ્રી નશાબંધી અને આબકારી ખાતુ, ગુજરાતરાજ્ય, અમદાવાદ.



# UNIQUE ENTERPRISES

201-203, 2nd Floor, Sun Enclave, Opp. Jalaram Temple, Karelbaug, 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 & Turbo Ltd.,  
Tekno-Medical (Germany)  
Abbott India Ltd,  
Nobel Biocare (Sweden) etc.  
Kalelkar Surgical Pvt. Ltd.