



ICMR BULLETIN

Vol. 40, No. 11-12

Nov–Dec. 2010

In This Issue...

Development of Clinical Pharmacology in India: Needs and Prospects	77
Inaugural ceremony of the centenary year celebrations of ICMR	79
Abstracts of Some Completed Research Projects	81
ICMR News	83

Editorial Board

Chairman	: Dr. V.M. Katoch Director-General, ICMR and Secretary, DHR Ministry of Health and Family Welfare, Government of India
Editor	: Dr. K. Satyanarayana
Asstt. Editor	: Dr. V.K. Srivastava
Members	: Dr. Lalit Kant Dr. Bela Shah
Publisher	: Shri J.N. Mathur

Development of Clinical Pharmacology in India: Needs and Prospects

The discipline of Clinical Pharmacology was started in India in 1960s by luminaries like late Dr. U.K. Sheth, Dr. Ranjeet, Roy Chaudhary, Dr. Ashok Vaidya and others and it contributed to the development of new drugs, regimens, rational use of drugs, pharmacogenetics, etc. This has been mostly done in a few academic institutions and Indian Council of Medical Research (ICMR), Council of Scientific and Industrial (CSIR) institutions and pharmaceutical industry. The eleventh five year plan of Govt. of India (2006-2011) envisaged reduction in infant mortality rate and maternal mortality ratio, reduction in malaria and dengue mortality, maintaining DOTS coverage and response for tuberculosis treatment and control, enhancement in public health spending of GDP, increase in infrastructure and human resources, etc. Medicines form a substantial amount of out of pocket expenses but account for only 10% of overall public health budget. The 11th plan envisaged developing essential medicines list, standard treatment guidelines, safe drugs, their rational use and dissemination of information with respect to these.

The discipline of Clinical Pharmacology needs to grow exponentially to meet the future challenges and opportunities of the projected growth of pharmaceutical industry to 20 billion by the year 2020, competition with other emerging markets like China and Brazil and because of the predicted strategies of pharmaceutical industry to collaborate with health care providers. The Indian Council of Medical Research in its centenary year has proposed a major boost for developing clinical pharmacology in India. A proposal for development of Clinical Pharmacology in India was submitted to the ICMR and a brain storming session with participation from all stake holders like physicians, paediatricians, public health experts, representatives of pharmaceutical industry, experts from Indian Institute of Technology (IIT), pharmacy colleges, academic institutions, scientists, and policy makers was organized in Mumbai on December 10, 2010. The recommendations from this brain storming meeting are expected to provide valuable input to the 12th five year (2012-2016) plan proposal.

The brain storming session started with the opening remarks from ICMR representative highlighting the work done by ICMR institutions and its Centres of Excellence and outlining the objectives of the proposed deliberations. An overview of the proposal for development of Clinical Pharmacology in India was presented by Dr. Nilima Kshirsagar, National Chair (Clinical Pharmacology), ICMR that included developing institute for clinical pharmacology, translational and pharmaceutical medicine and a consortium to undertake drug development focusing on public health and rural health needs, developing infrastructure and networking for clinical trials, training and capacity building, outcome research and personalized medicine, etc.

A session was specially devoted to identifying needs and demands. The physicians like Padma Vibhushan Dr. R.D. Lele from Department of Nuclear medicine, Leelavati

Hospital, Mumbai and Dr. S.R. Narhari, Director, Institute of Applied Dermatology, Kasargod, Kerala while deliberating on the subject emphasized the need for computerization of patient records and computerized prescriptions to avoid medication error. Dr. Sunil Karande, Professor of Paediatrics, Seth G.S. Medical College, Mumbai highlighted the problem of use of off label drugs especially the paediatric drugs and need for clinical trials and formulations suitable for children.

Representatives from pharmaceutical industry Dr. Shashank Rohatagi, Vice President, Piramal Life Sciences, Mumbai; Dr. Kiran Marthak, CEO, Veeda Clinical Research Ltd., Ahmedabad; Dr. Sonal Vora, Director, Synergetic Learning Solutions, Mumbai; and Mr. Sandeep Saxena, CEO, Action Biotech, Pune highlighted the need for training, including hands on training to meet with demands of various roles clinical pharmacologists need to play in industry, capacity building amongst experts to evaluate investigational new drug application and other regulatory evaluations, the need to permit phase 1 studies in India, and infrastructure development for carrying out phase 1, phase 'zero' studies.

The public health expert Dr. Ravindra Kembhavi, Associate Professor of Preventive and Social Medicine, Seth G.S. Medical College, Mumbai emphasized the need for National Drug Authority that will regulate drug price, and availability and quality of medicines. The need to evaluate and integrate AYUSH products with modern medicine was also brought up.

Dr. G.J. Samathanan, Advisor and Head Technology Development and Transfer, Department of Science and Technology (DST) highlighted the pivotal role of DST for developing products but at the same time expressed disappointment as the further bench to bed side work is lacking. He suggested that this opportunity must be utilized by the agencies like ICMR, DST and other organizations to come together and form a council for clinical pharmacology, information assessment and forecasting under the Department of Health Research.

In the second session experts like Dr. Rinti Banerjee, Professor, Biomedical Engineering Group, IIT, Mumbai; Dr. Mangal Nagarsenkar, Professor and Head, Department of Pharmaceutics, Bombay College of Pharmacy, Mumbai; Dr. Chetan Chitnis, Scientist at the International Centre for Genetic Engineering and Biotechnology, New Delhi; and Dr. Bhuvaneshwar, Head, Biomedical Technology Wing, Shree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum deliberated on the ways and means of meeting with the demands of drug industry. A general consensus emerged that the country has the technology and expertise to develop and modify drugs, devices as well as food fortification to meet the needs of public health and rural areas. But it is scattered and there is great need to network, collaborate and bring them together to work using interdisciplinary technology. Need for appropriate changes and updating of regulatory requirements, developing expertise in toxicology for the new types of products was emphasized. Dr. Shradha Anwikar, Asstt. Professor, KEM Hospital, Mumbai and Dr.

Chitra Lele, Chief Scientific Officer, Sciformix Corporation, Pune highlighted the availability of extensive data that remains in various healthcare sites and can be used for outcome research which will provide valuable information useful for drug development, pharmacovigilance as well as developing therapeutic guidelines.

Scope of capacity building with training in drug development and various aspects of Clinical Pharmacology, information on career opportunities to under graduate, graduate students (of Commerce, Arts, Science, Pharmacy, Medicine), career paths for clinical pharmacologists and need for a registry of experts and trained manpower was highlighted by experts like Dr. Nithya Gogatay, Associate Professor, Department of Clinical Pharmacology, Seth G.S. Medical College, Mumbai; Dr. Parthasarathi, Head, Clinical Pharmacy Services, JSS Medical College, Mysore and Dr. Daniel Joseph, Professor, Department of Pharmacology, M.G.M. Medical College, Navi Mumbai.

Participants greatly appreciated the initiatives and steps taken by the ICMR to provide a boost to the development of Clinical Pharmacology in India and arrived at the following recommendations.

Recommendations

1. A Council for clinical pharmacology, information assessment and forecasting under the Department of Health Research, Govt. of India or an Institute of Clinical Pharmacology, Translational and Pharmaceutical Medicine under ICMR in collaboration with DST, DBT and AYUSH is needed urgently.
2. The proposed Council/Institute should be inter disciplinary, public health oriented with a vision to develop expertise, information, services, training and safe, effective and economic products that will serve the population of India (provide guidelines for other countries) particularly in rural and remote areas to improve health indices.
3. Some of the pilot projects and new ideas immersed (listed below) need to be components of the Council/ Institute and should be initiated immediately.
 - a. A technology, biology, chemical, health care consortium should be formed to develop products, and translate existing technologies from bench to bed side for commercialization.
 - b. Infrastructure and Centers of Excellence for animal models, toxicology, early phase trials, proof of concept, phase O studies, registry of experts in the form of faculty association and data bases of patients should be developed for carrying out studies on products.
 - c. Capacity building, human resource development, training programme with hands on experience catering to industry, public health, research and service needs, with career paths and creation of awareness of opportunities need to be started.
 - d. Development of computerization of patient records, computerized prescriptions for avoiding

- medication error, expertise, software, outcome research for public and private sector should be initiated for information on prescribing trends, comparative effectiveness, adverse reaction to provide evidence base for standard treatment guidelines, off label paediatric drug use, antimicrobial drug use, etc.
- e. Pharmacovigilance, pharmacogenetics, pharmacogenomics, personalized medicine research and studies with common protocol and validation should be carried out.
 - f. Research on norms for validation, advertising practices and integration of AYUSH products with modern medicine, training of AYUSH doctors into modern medicine should be carried out to provide guidelines for implementation.
 - g. Participation of society, patient groups for chronic diseases, educational programmes, research on educational methods, mass media communication for rational use of medicines should be taken up as an important activity.
 - h. There should be review of data with Drugs Controller General of India (DCGI) and consultations should be held to review and where needed recommend amendments of schedule Y regulations for new products, devices, drug delivery systems, plant extracts, vaccines, developed in India and other countries.

This write up has been compiled and contributed by Dr. Nilima Kshirsagar, National Chair, Clinical Pharmacology, ICMR at KEM Hospital, Mumbai

Inaugural ceremony of the centenary year celebrations of Indian Council of Medical Research

The Indian Council of Medical Research (ICMR) entered into hundredth year of its establishment on 15th November 2010. The centenary year celebrations were launched by the Hon'ble Union Minister of Health & Family Welfare Shri Ghulam Nabi Azad at a function held on 15th November, 2010 at India Islamic Cultural Centre, New Delhi by lighting a lamp. Shri Azad in his inaugural address said that it is one of the oldest medical research councils in the world established in 1911, in the name of Indian Research Fund Association as the officers of the then Indian Medical Services had the vision and foresight to create such an organization to fund and co-ordinate medical research in the country. He added that soon after Independence, in 1949 it was reorganized with a new name as Indian Council of Medical Research and has blossomed into a vibrant network of 30 permanent Institutes/Centres and over 70 field stations, employing over 5000 personnel including 750 scientists. On the occasion Shri Azad highlighted the rich traditional and cultural heritage of the country and kind of medical work carried out in ancient India. He highlighted the contributions of ICMR and congratulated ICMR scientists for tackling many health problems faced by the country in the area of cholera, tuberculosis, vector borne-diseases like malaria, filariasis, Kala-azar, etc and assisting and guiding in the formulation of many national health policies and disease control strategies. He added that the



Hon'ble Union Minister of Health and Family Welfare Shri Ghulam Nabi Azad delivering speech on the occasion of inaugural ceremony of ICMR centenary year celebrations on 15th November, 2010

ICMR has evolved over the years in line with changing health research needs, effectively addressing the new challenges that have emerged as a result of the economic, demographic, nutritional and epidemiological transition of the country and highlighted that with the changing health challenges, the demands on ICMR are also increasing and informed that the Mission of ICMR is to promote better health through research.



Hon'ble Health Minister lighting the lamp

Shri Gandhiselvan, Hon'ble State Minister for Health and Family Welfare also applauded the achievements of ICMR's glorious 100 years and highlighted the role of ICMR in handling the crisis situation arising out of the outbreak of diseases like dengue, chikungunya, H1N1 and others in recent past. He further appreciated the ongoing research work being carried out in various ICMR Institutes/Centres located in different parts of the country and added that it is important that the research findings of the ICMR should reach at the grass root level to help the vulnerable section of the society.



Hon'ble Union Minister of Health and Family Welfare, Govt. of India, Shri Ghulam Nabi Azad inaugurating the Centenary Celebrations of the ICMR on 15th November, 2010. *From left to right* – Dr. V.M. Katoch, Secretary, Department of Health Research and Director-General, Indian Council of Medical Research, New Delhi, Union Minister of Health and Family Welfare, Shri Ghulam Nabi Azad and Minister of State for Health and Family Welfare, Shri S. Gandhiselvan

Dr. Vishwa Mohan Katoch, Secretary Department of Health Research and Director General, ICMR appreciated the efforts and hard work put in by his predecessors in bringing glory and name to ICMR. He expressed satisfaction the way ICMR has progressed and stressed the need that it should work as a fulcrum and driving force to carry forward the medical and health research in the country. He highlighted the achievements of ICMR research activities and progress of 100 years, but at the same time, cautioned that with the growing responsibilities while working in synergism with the newly created Department of Health Research, the ICMR will have to come forward and strive hard in delivering the process and products to benefit the common man and expand the outreach of the ICMR in every nook and corner of the country. He added that the Council has accepted a twin track approach to meet its objectives—intramural (through its Institutes) and extramural research (through grants-in-aid to projects in non-ICMR institutions). He informed that the permanent Institutes of ICMR are mission-oriented discipline/disease-specific laboratories strategically located in different parts of the country. He informed that the majority of the research activities of the Council are directed towards diseases that have significant links with poverty and tribal population with a special focus on health of marginalized and under privileged section of the society. Dr Katoch also gave a brief view of the proposed year long activities of the Council planned to mark its centenary celebrations. He informed that a centenary calendar, a coin, a new stamp on ICMR centenary, a document on the history of ICMR, various



Dr. Vishwa Mohan Katoch, Secretary DHR and DG, ICMR addressing the audience



Hon'ble Minister releasing the DVD set of IJMR Archive since inception (1913-2010)

theme based articles, publications, seminars, symposia, conferences, exhibitions, meetings and other programmes are planned through network of ICMR institutes/centres and its Hqrs office in New Delhi.

On the occasion three books published by the ICMR viz., Phytochemical Reference Standards of Selected Indian Medicinal Plants; INSERCH - Indian Study on Epidemiology of Asthma, Respiratory System and Chronic Bronchitis; and Nutrient Requirements and Recommended Dietary Allowances for Indians-2010 were also released by the Hon'ble Health Minister Shri Ghulam Nabi Azad. Besides, a DVD set containing 8 DVDs of archives prepared after digitization of all the articles published in Indian Journal of Medical Research since inception (1913) in searchable interface was also released by the Hon'ble Minister.

Former Director General of ICMR Dr. S.P. Tripathi also narrated his experiences on the occasion and informed that lack of promotion and stability in services were the major problems in the earlier years which were taken care of in



Secretary, DHR and DG, ICMR Dr. V.M. Katoch and Dr. S.P. Tripathi former DG, ICMR

later years for providing a better atmosphere to excel. He also emphasized on the work carried out by the ICMR in the area of nutrition, reproduction, maternal & child health and in the area of communicable and non-communicable diseases. He also highlighted the role Council played in dealing with health problems arising due to disasters like cyclone, earth quake and Bhopal gas tragedy, etc.

Former DG of ICMR Dr. C. Gopalan in his Foundation Day lecture described that the situation of malnutrition, under nutrition, vitamin A deficiency, etc in India are major

public health concerns. He highlighted the importance of iodized salt and use of double fortified salt and vitamin supplementation. He also traced the establishment of Nutrition Laboratories in Coonoor under the



Dr. C. Gopalan delivering the Foundation Day Lecture

Directorship of Lord Mac Carrison in early part of the 20th century and later its conversion to National Institute of Nutrition Research and shifting to Hyderabad. He appreciated the pioneering research work carried out by the Institute in the area of nutrition particularly in developing recommended dietary allowances (RDA), quality standards of nutrients, work done in the area of kwashiorkor, etc.

Dr. M.S. Swaminathan, Chairman of the Swaminathan Foundation in his oration emphasized on the progress India has achieved in the area of food security and self reliance particularly after green revolution. He also

stressed the need of synergism between food products and human health. He highlighted the issue of climate change and its impact on food production and expressed dissatisfaction on the storage of food grains in open areas which go waste in rains and in other unfavourable situations and demanded that special efforts



Dr M.S. Swaminathan delivering Foundation Day Lecture

need to be taken to avoid these untoward incidences. Dr. Swaminathan also dealt on the Millennium Development Goals and expressed concern that considering the current progress it seems difficult to achieve the targets by the year 2015. He congratulated ICMR for entering into hundred years of its existence and wished all success to its scientists and staff for their future endeavours.

The function ended with the vote of thanks by Ms Shalini Prasad, joint secretary, Ministry of Health and Family welfare, Govt. of India.

Compiled by

Dr. Rajni Kant, Scientist 'D', ICMR Hqrs., New Delhi

ABSTRACTS

Some Research Projects Completed Recently

Evaluation of utility of pepsinogen-I, pepsinogen-II and gastrin-17 serum levels in diagnosis of cancer associated gastric mucosal lesions like intestinal metaplasia in patients with or without *H. pylori* infection in India.

The study was carried out on 98 patients with gastric cancer (GC) and 62 dyspepsia patients to evaluate the role serum PG-I, PG-II, PG-I/PG-II ratio and gastrin17 (G-17) as markers of intestinal metaplasia (IM) and atrophy in a low incidence area of GC. The patients were evaluated by endoscopy, histology of gastric biopsy for IM and *H. pylori*, rapid urease test and IgG antibody (positive result in any two diagnostic). Serum levels of PG-I, PG-II and G-17 were estimated using ELISA kits.

The study revealed that the patients with IM (n=44) had lower PG-I/PG-II ratio than that without this (n=116; median 4.4, 0.37-23.6 vs. 6.3, 0.19-38.6, respectively; p=0.005). The cut-off PG-I/PG-II ratio of 6.0 had sensitivity of 64% and specificity of 52% to detect IM. A total of 26 (60%) patients with IM and 52 (53%) with GC had PG-I/PG-II ratio <6, serum level of G-17 was comparable among patients with and without IM. It was concluded that though PG-I/PG-II ratio was lower in patients with IM, only 60% of them had low ratio suggesting that this test and G-17 may not be useful to detect IM in low-incidence area of GC endemic for *H. pylori* infection.

Dr. U.C. Ghoshal

Department of Gastroenterology

Sanjay Gandhi Postgraduate Institute of Medical Sciences
Lucknow

Investigation of inborn errors of metabolism by tandem mass spectrometry

Tandem mass spectrometry is a major technological advance in the screening for inborn errors of metabolism (IEM). It has the advantage of sensitive and simultaneous multiple disease screening with minimal sample requirement. The diseases detected include amino-acidemias, fatty acid oxidation disorders, and organic acidemias.

Using automated electrospray tandem mass spectrometry 9034 children were screened for IEM by analyzing amino acids and acylcarnitines in dried blood filter-paper samples. Blood samples were collected by heel prick from 4974 asymptomatic newborns from 48 hours to 10 days after birth, and 4060 clinically-selected symptomatic children (370 newborns and 3690 sick children) at the time of presentation.

Among the asymptomatic newborns, 2 were identified with an IEM: both had propionic acidemia, giving a prevalence of 1 in 2483. In the symptomatic group, 119 (2.9%) children were identified with a metabolic disorders: 64 (53.78%) had amino acid disorders, 52 (43.69%) had organic acidemias, and 5 (4.2%) children had disorders of fatty acid oxidation. After the diagnoses were further confirmed through other biochemical studies, suitable treatment was advised and follow-up carried out wherever possible.

Results of the study showed that inherited metabolic disorders are not rare in India, with a prevalence of 1 in 2487

in newborns. Using the high throughput technology like tandem mass spectrometry one could screen entire newborn populations or specific subgroups for an array of disorders in order to target interventions to individual newborns that will prevent the deleterious consequences of these disorders.

Prof D. Nagaraja

Department of Neurochemistry
National Institute of Mental Health and Neurosciences
Bangalore

A pilot study on the prevalence of rheumatic heart disease among Children of 5-15 years in Ballabgarh block of Haryana using echocardiography with doppler

A cross sectional survey was carried out on children aged 5-15 years, from government and private schools, in a pre identified rural area to diagnose rheumatic heart disease (RHD) in asymptomatic children using portable echocardiography. After a history and physical examination, echo-doppler was performed, using a bedside portable echocardiography machine. A diagnosis of RHD was made by echo-doppler if one or more of the following were present: a) Mitral stenosis; b) Mitral regurgitation (MR) and / or aortic regurgitation (AR) with regurgitation jet length of more than 2 cm in at least two echo planes, along with abnormal valve morphology (a bicuspid aortic valve to be excluded in cases with AR); c) MR and / or AR with regurgitant jet length of 1-2 cm, and abnormal valve morphology, in the presence of a history suggestive of rheumatic fever. Of the 2600 children (age 5-15 years), 1035 were studying in government schools and 1565 were from private schools (1340 males and 1260 females). The mean age was 11.39 ± 2.76 years. All children were asymptomatic.

History suggestive of rheumatic fever was obtained in 85 cases. MR was diagnosed by clinical examination in two cases only (clinical prevalence of RHD 0.8/1000). Echo-doppler diagnosed RHD in 51 cases, giving a prevalence of 19.6/1000. Thickening of the valve was present in all cases. Doppler revealed mild MR in 40 and moderate MR in 4 cases. Mild AR was detected in 3 and combined MR and AR in 4 cases. Seven of these 51 cases had a history suggestive of rheumatic fever. Other cardiac lesions identified by echo-doppler were atrial septal defect (5), bicuspid aortic valve (2, one with AR), ventricular septal defect (1), patent ductus arteriosus (2) and other congenital cardiac lesions (2). On univariate analysis, older age, lower socioeconomic status and living in houses made of mud, bamboos were found to be significant predictors of high prevalence of RHD.

It may be concluded that the prevalence of RHD was several folds higher, when screening echo-doppler was used. Prevalence is likely to be higher in children who are older and less privileged economically.

Dr. Anita Saxena

Department of Cardiology
All India Institute of Medical Sciences
New Delhi

Study of ocular findings in HIV seropositive immunocompromised individuals

A total of 180 HIV seropositive patients from anti

retroviral therapy (ART) clinic of Lok Nayak Jai Prakash Narayan Hospital underwent detailed ocular examination and laboratory investigations comprising of serological investigations for CMV, HIV I, II, *Toxoplasma gondii*, Varicella Zoster Virus (VZV). The patients were divided into 3 groups – (i) 64 patients with CD4 counts 200 cells/ μ l (group A), 68 patients with CD4 counts between 200-500 cells/ μ l (group B) and 48 patients with CD4 count. > 500 cells/ μ l (group C). A total of 28.7% of patients had HIV associated eye disease with increased prevalence in group A (48.4%) compared to group B (42.1%). A total of 8 patients (4.4%) had CMV retinitis with increased prevalence in group A (5.64). There were 6 patients with HIV retinopathy, 3 each in group A & B. There were 3 patients with drug induced anemic retinopathy and 1 patient with IRU.

Prevalence of ocular manifestations was higher in patients with CD4 count <200 cells/ μ l. High prevalence of IgG antibodies of high avidity CMV, HIV I, HIV II, Toxo and VZV was present while very low prevalence of IgM antibodies against above infections were found in all the groups implying few cases with recent or primary infections in the HIV patients examined and no significant correlations of serologic findings with ocular manifestations were noted. Initiations of highly active antiretroviral treatment (HAART) in HIV patients with CD4 count <200 significantly reduced ocular manifestations viz-a-viz those seen in pre-HAART period. Ocular examinations in HIV patients on or without HAART is essential to detect early ocular manifestations of disease or side effects of ART.

Dr. Ritu Arora

Guru Nanak Eye Centre
New Delhi

Estrogen and progesterone receptor status in breast cancer: Effect of oral contraceptive pills and hormone replacement therapy

The study was carried out on 358 women patients with histologically confirmed primary breast carcinoma and 310 controls matched for age and residential status (urban/rural) to find out if frequent use of oral contraceptive pill (OCP) and hormone replacement therapy (HRT) during the productive period is a contributory factor in carcinoma development. The most important component of the investigation was the study of steroid receptors like estrogen, progesterone receptor and HER2-neu and the role of OCP/HRT and their relation with breast cancer.

The OCP users appeared protective in the case of breast carcinoma. When this risk factor was estimated according to ER status, surprisingly, insignificantly increased risk ratios (RR=1.87 95% CI 0.69-5.05) were found for OCP users with positive tumor subtypes and only patients with ER-tumors seemed protective (RR=0.64, 95% CI 0.30-1.36). Several RRs for OCP use were elevated with positive tumour subtypes (RR=1.77 95% CI 0.67-4.66) but not associated with negative breast cancer. However, due to small numbers, most of these results were not statistically significant. It is concluded that the contribution of OCP use to breast cancer development has been extensively researched. Recent and longer durations of OC use have shown the most

consistently positive, though small, associations with breast cancer. This study is limited by the small number of OCP users identified. Therefore, these results need to be interpreted with caution. However, the significant findings on OCP use and breast cancer warrant further study in larger data sets.

Dr. H.S. Shukla

Department of Surgical Oncology
Institute of Medical Sciences, BHU
Varanasi

Ultrasound biomicroscopic study of anterior segment changes after phacoemulsification and foldable intraocular lens implantation

A prospective randomized controlled study was undertaken in 25 patients of occludable angles/closed angles cataract (age \geq 40 years) and 25 patients with open angle cataract to elucidate the anterior segment changes after phacoemulsification and foldable intraocular lens implantation (IOL) using UBM.

Patients were examined with UBM before and 1 and 3 months after surgery. At each UBM examination, axial

images of the anterior chamber and radial sections of the superior, lateral, inferior, and medial quadrants were obtained. The average increase in ACD was 850 μ m in patients with open angle and 801 μ m in patients with angle closure. Iris-lens contact distance significantly decreased after surgery in all the patients with open angle as well as angle closure. The Anterior chamber angle significantly increased by approximately 50% of the initial value by three measurement methods used: AOD250, AOD500 and TIA. The ILCD did not exist after surgery in any patients.

After phacoemulsification and foldable IOL implantation, UBM revealed that the iris diaphragm shifted backward deepening the anterior chamber by approximately 850 μ m and 810 μ m and widening its angle by approximately 12° and 15° in cases of open and close angles respectively. These findings may be of clinical significance in eyes with angle-closure or with occludable angles.

Dr. A.K. Shah

Lt. Col. Dr. Vijay Mathur

Department of Ophthalmology
Army Hospital (Research & Referral)
Delhi Cantt., New Delhi

ICMR NEWS

The following meetings of various technical committees/groups of the Council were held in October/November 2010.

Meetings of Task Forces (TFs)/Steering Committee/Expert Groups (EGs) and Other Meetings held at New Delhi

TF on Celiac Disease	: October 27, 2010
EG on HIV related Cancer	: October 28, 2010
EG on School based Interventions for Cardiovascular Risk Factors	: November 12, 2010
Meeting of Indo-Australian Committee on Road Traffic Injuries	: November 25, 2011

Meetings of Project Review Committees (PRCs) held at New Delhi

PRC on Ophthalmology	: October 7, 2010
PRC on Human Genetics	: October 8, 2010
PRC on Urology	: October 22, 2010
PRC on Otorhinolaryngology	: October 29, 2010
PRC on Oncology	: November 1-2, 2010
PRC on Cardiovascular Disease	: November 23, 2010
PRC on Neurology	: November 30, 2010

Participation of ICMR scientists in Scientific Events

Dr. Anuradha Mishra (Tripathy), Scientist C, National Institute of Virology (NIV), Pune, participated in the IV Vaccine and ISV Annual Global Congress, at Vienna (October 3-5, 2010).

Drs. D.R. Saha and Kamlesh Sarkar, Scientists E, Dr. N.S. Chatterjee, Scientist D, Dr. R.N. Rajendran, Scientist B, National Institute of Cholera and Enteric Diseases (NICED), Kolkata, participated in the XIV International

Conference on Emerging Infectious Diseases at Penang (October 4-6, 2010).

Dr. Neena Valecha, Scientist F, National Institute of Malaria Research (NIMR), New Delhi, participated in the MMV's Access and Delivery Advisory Committee Meeting, at Geneva (October 5-7, 2010).

Dr. Deepa Bhartiya, Scientist D, National Institute for Research in Reproductive Health (NIRRH), Mumbai, participated in the Biennial Meeting on Germ Cells, at New York (October 5-9, 2010).

Dr. Manisha Madkaikar, Scientist D, NIRRH, Mumbai, participated in the XIV Meeting of the European Society for Immunodeficiencies, at Istanbul (October 6-9, 2010).

Dr. R.S. Paranjape, Director and Dr. Cecils Dayaraj, Scientist E, National AIDS Research Institute (NARI), Pune, participated in the IX International Conference on Antivirals for Neglected and Emerging Viruses at Lubeck (October 10-13, 2010).

Dr. K.D. Ramaiah, Scientist E, Vector Control Research Centre (VCRC), Puducherry, participated in the I Meeting of the Gate's Foundation's at St. Louis (October 11-12, 2010).

Dr. Sunita Saxena, Director, Institute of Pathology, New Delhi, participated in the Workshop on Beyond the Genome: The True Gene Count, Human Evolution and Disease Genomics at Boston (October 11-13, 2010).

Dr. J.M. Deshpande, Director, Enterovirus Research Centre (EVRC), Mumbai, participated in the Training on Reverse Transcriptase Polymerase Chain Reaction, at Yangon (October 11-15, 2010).

Dr. S. Sabesan, Scientist F, VCRC, Puducherry, participated in the Symposium on Repositioning Disease Control as Part of Health Systems Development, at

Washington, D.C. (October 14-16, 2010).

Dr. S.K. Singh, Scientist B, Rajendra Memorial Research Institute for Medical Sciences, Patna, participated in the Training on optimization of Protocol for the Clinical Research at Berlin (October 18-22, 2010).

Dr. R.C. Dhiman, Scientist F, NIMR, New Delhi, participated in the XVI UNFCCC Conference at Dhaka (October 19-21, 2010).

Dr. O.P. Singh, Scientist E, NIMR, New Delhi, participated in the Conference on Parasite to Prevention Advances in the Understanding of Malaria, at Edinburgh (October 20-22, 2010).

Dr. P. Jambulingam, Director, VCRC, Puducherry, participated in the Meeting of the Integrated Vector Management Group on Capacity Strengthening, at Washington, D.C. (October 20-22, 2010).

Dr. G.B. Nair, Director, NICED, Kolkata, participated in the VIII Asia Pacific Travel Health Conference, at Nora (October 20-23, 2010). Dr. Nair and Dr. Dipika Sur, Scientist E, NICED, Kolkata, visited the Quality Control Facility at Fuji Susono and the Yokult Control Institute of Microbiology, and Participated in the XIX Symposium on Intestinal Flora, at Kunitachi City (October 25-26 and 26-28, 2010 respectively).

Dr. K. Raghvendra, Scientist E, NIMR, New Delhi, participated in the Impact on Insecticide Resistance Project Meeting at Yaounde (October 28-29, 2010).

Dr. Vas Dev, Scientist E and officer-in-charge, NIMR Field Station Guwahati, participated in the III International Forum for Sustainable Management of Disease Vectors, at Hongzhu (October 28– November 1, 2010).

Dr. Samiran Panda, Scientist E, NICED, Kolkata, participated in the Meeting on “Place of Sex Workers in the Programme Science of STI and HIV” at Prague (November 1-3, 2010).

Dr. K.V. Radhakrishna, Scientist D, National Institute of Nutrition (NIN), Hyderabad, participated in the XXXII Session of the Codex Committee on Nutrition and Food for Special Dietary uses, at Santiago (November 1-5, 2010).

Dr. V.K. Sarma, Scientist C, EVRC, Mumbai, participated in X International Conference on Molecular Epidemiology and Evolutionary Genetics of Infectious Diseases, at Amsterdam (November 3-5, 2010).

Mr. T. Longvah, Scientist F, NIN, Hyderabad, participated in the International Scientific Symposium on Biodiversity and Sustainable Diets, at Rome (November 3-5, 2010).

Dr. Neena Valecha, Scientist F and Dr. Anupkumar Anvikar, Scientist D, NIMR, New Delhi, participated in the Annual Meeting of the American Society of Tropical Medicine and Hygiene at Atlanta, Georgia (November 3-7, 2010).

Dr. Triveni Krishnan, Scientist D, NICED, Kolkata, participated in the LVIII Japanese Domestic Congress of Virology, at Tokushima (November 7-9, 2010).

Dr. S.S.Y.H. Quadri, Scientist C, NIN, Hyderabad, participated in the IV AFLAS Congress Meeting in Conjunction with V AMMRA Meeting and XI CSLAS Annual Meeting, at Taiwan (November 9-11, 2011).

Dr. R.S. Jadhav, Scientist C, NIV, Pune, participated in the XI Meeting of the WHO Product Development Group for Measles Aerosol Vaccine, at Paris (November 11-12, 2010).

Dr. A.C. Mishra, Director, NIV, Pune, participated in the WHO Informal Meeting on Smallpox Laboratory Network, at Geneva (November 15-16, 2010).

Dr. B. Ravichandran, Scientist B, National Institute of Occupational Health, Ahmedabad, participated in the International Symposium on Global Issues of Mutagens in the Environment and their Health Effects (November 16-17, 2010).

Index: ICMR Bulletin Vol. 40, 2010

Title	Month	Issue	Page No.
Vaccines for Influenza A H1N1 (2009)	January	1	1–7
Time Trends in Cancer Incidence Rates 1982-2005	February	2	9–12
Global Malaria Research with Particular Reference to India in the Light of a Newly Developed Database	March–April	3–4	17–23
Draft National Health Research Policy	May	5	29–37
Precision Mosquito Survey using GIS: A Case Study of <i>An. minimus</i> – A Foot hill Vector of Malaria in India	June	6	41–48
Indian Journal of Medical Research: A Journey from Inception to Digital Age	July–August	7–8	53–59
Visibility of Indian Biomedicine and Life Sciences Journals is Escalating	September	9	61–66
National Institute of Cholera and Enteric Diseases, Kolkata	October	10	69–75
Development of Clinical Pharmacology in India: Needs and Prospects	Nov.–Dec.	11–12	77–79