KARNATAKA STATE PHARMACY COUNCIL
DIC DRUG INFORMATION CENTRE
Authentic Drug Information

DIC Newsletter

KARNATAKA STATE PHARMACY COUNCIL

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Newsletter of Drug Information Centre, KSPC

Official Desk

DRUGSCAN

As healthcare professionals in a developing country, we get to view various aspects of problem areas in our health care set up. On one side we are stuck in the vicious cycle where poverty causes ill health and ill health in turn keeps our people in poverty. As pointed by Dr. Gro Harlem Brundtland, Director General of World Health Organization, as a developing country we still face issues such as the lack of a primary health care infrastructure, insufficient funding for health and pharmaceuticals, high cost of newer essential drugs and on occasions, ineffective management of available resources. On the other hand we get to see the inadequacy of post marketing safety data of drugs in our country. Reporting and recording of Adverse drug reactions are carried out in only a few health care systems. In developed countries, the post-marketing safety data is given as much importance as to the pre-marketing clinical data. For example, the Food and Drug Administration in the United States of America monitors these parameters. In addition to this, there are consultations of the pharmaceutical manufacturers with FDA to strengthen the drug's labeling. As a follow up of these activities, there is active monitoring of adverse events associated with the drugs. Such constant pharmacovigilance leads to events such as these in the United States of America. **Cisapride** is a prescription drug treatment approved only for severe nighttime heartburn experienced by adult patients with gastroesophageal reflux disease (GERD) that does not adequately respond to other therapies. As of December 31, 1999, use of Cisapride has been associated with 341 reports of heart rhythm abnormalities including 80 reports of deaths in USA. Most of these adverse events occurred in patients who were taking other medications or suffering from underlying conditions known to increase risk of cardiac arrhythmia associated with Cisapride. Hence, **Janssen Pharmaceutica Inc., of Titusville, N.J., USA**, has announced that it has decided to stop marketing Cisapride (Propulsid)® in the United States as of July 14, 2000. The effective date of the voluntary action is intended to provide adequate time for patients and physicians to make alternative treatment decisions. According to the FDA Talk Paper, released on 22 March 2000 , patients who are currently prescribed Cisapride are urged to promptly contact their health care providers to discuss alternative treatments. Physicians who are treating patients with severely debilitating conditions for whom they believe the benefits of the Cisapride may still outweigh its risks are encouraged to contact Janssen .

Cisapride is available in India in more than 30 brands manufactured by national and multinational pharmaceutical concerns. Another 10 brands of the combination of Cisapride with Simethicone are also available. We need to watch the regulatory action of the Ministry of Health of our Country.

Sunitha Srinivas
Editor & Deputy Director

QUERY OF THE MONTH

This query was received from **Dr. P.Jagota Director, National Tuberculosis Institute,** Bangalore, to find the ocular side effects (ADR) of Cephradine. This was sent to Dr. Jagota by an Indian patient from USA after his visit to India.

The following is the frightening account of a patient whose vision was seriously impaired because of Cephradine, an antibiotic, he was prescribed by a physician in India. The patient later found out that the side-effects of this drug are well known and that Cephradine is only administered in life-threatening situations in the US and other Western Countries.

Last December, the patient visited few metro cities in India. During departure from Calcutta, the patient contracted some bacterial throat infection that resulted in high fever. He started taking Crocin (acetaminophen) and later in the evening met a family-recommended doctor in Mayurvihar, Delhi. Considering his transient stay and travel plans, the doctor prescribed an antibiotic – Cephradine (200mg tablet, 3 per day for 5 days), an expectorant, and betadine germicide for gargling. The fever subsided in a couple of days, but the patient started to feel unusually weak and tired. However, the patient thought weakness was as a result of the high fever and the loss of appetite. He continued the medicine because the doctor had cautioned that he had to complete the full course even if he felt better. Everything else seemed fine except for the weakness.

The morning of the sixth day, in the airport while returning to US, he suddenly experienced a very frightening feeling. He was not able to see clearly and all the images seemed blurred. He had acute double vision i.e., he was seeing two images of all objects – one from left eye and the other from the right eye. In Bombay, he went to the local opthalmologist, who suggested that the best cure was to relax and sleep, and not to strain the eye.

After returning to Austin, he underwent several eye examinations and was amazed to learn that the opthalmologists there were quite familiar with the side effects of Cephradine. It seems that there are several cases wherein high doses of the first-generation cephalosporin antibiotics have affected the audio and visual senses of the patients. In fact, the doctors in the United States prescribe very low doses of these antibiotics or avoid these drugs altogether. It is more popular as a veterinary medicine.

The double vision reduced slightly but he continued to see two images for distant objects. He is still not able to drive and will require special corrective lenses if the problem persists.

The patient has passed on this information with the sincere hope that the doctors in India would restrict the prescription of these drugs to a minimum and advise the patients about the possible side effects before administering or prescribing these antibiotics.

Ocular side effects of Cephalosporins:

Systematic Administration: 1. Eyelids or Conjunctiva, 2. Nystagmus: a) Allergic reactions b) Erythema c) Conjunctivitis – nonspecific d) Edema e) Angioneurotic edema f) Urticaria g) Erythema multiforme h) Stevens–Johnson syndrome i) Exfoliative dermatitis, 3. Subconjuctival or retinal hemorrhages secondary to drug – induced anemia 4. Visual hallucinations 5. Diplopia (Cephaloridine) 6. Problems with colour vision – color vision defect (cephaloridine),Corneal edema - peripheral (cefaclor)

Clinical Significance: Rarely does this group of drugs given systematically cause ocular side effects; however, if they occur, they are usually associated with a generalized allergic event. Type III hypersensitivity, including reversible limbal hyperemia, mild conjunctivitis, and peripheral corneal edema, has been reported with cefaclor therapy. All reported ocular side effects appear to be transitory if the drug is discontinued.

References:

1.Anti-Infectives: Antibiotics. In:, Drug-Induced Ocular Side Effects, IV Edition, F. T. Fraunfelder, Williams & Wilkins, USA, 1996, pg. 20-22.

LECTURE

Karnataka State Pharmacy Council organized a lecture on "Clinical Pharmacy Practice & Drug Information" by Ms. P. K. Lakshmi, Deputy Director, Drug Information Centre on 1st April 2000. This was targeted for the hospital pharmacists and academicians handling this subject.

The objective of Community Pharmacy Practice was explained, which is to optimize patients' outcome by working to achieve the best possible quality use of medicines. This becomes more significant in a developing country like India with significant drug use problems which are as a result of a variety of economic, social, political, occupational and regulatory factors.


Ms. P.K.Lakshmi

The most important of these being lack of awareness of services of drug information center; availability of 60,000 formulations; national drug policy being industry focused rather than health focused; lack of awareness of the principles of rational use of drugs among healthcare professionals; widespread sale of prescription drugs over the counter despite this being illegal and to add on to these issues, is the high level of illiteracy and poverty among patients. Pharmacists are under utilized here and clinical pharmacy is practised only in few Indian hospitals.

All the aspects of Clinical Pharmacy was highlighted to the participants and the stress was on the counseling of medication to the patients. Here, pharmacists have a responsibility to provide sufficient information and counseling to enable patients and/or their carers to achieve informed and judicious use of their medicines.

It was highlighted that it is important for the pharmacists to strive for a fundamental change in the healthcare system. Implementation of Clinical Pharmacy Program requires funding and continuing support from the other healthcare professionals in understanding this concept. The major hospitals in India should come forward to use the Drug Information Center to obtain unbiased information and also to implement the Clinical Pharmacy Practice to optimize patient outcome by working to achieve the best possible quality use of medicines.

The practice of clinical pharmacy constantly evolves according to the changing needs associated with contemporary health care. Pharmacists must contribute to achieving the highest possible standards of patient care, giving primacy to the interests of patients. Clinical pharmacists must function effectively in the multidisciplinary healthcare team, contributing to patient care through their unique training and expertise in therapeutics.

Publication from KSPC

1. "Handbook of dispensing instructions" has been compiled for easy access of information during dispensing by pharmacists. Pg.3 of the present and subsequent issues of DIC newsletter will carry portions of it. Kindly contact KSPC after 15th May, 2000 to procure the handbook.

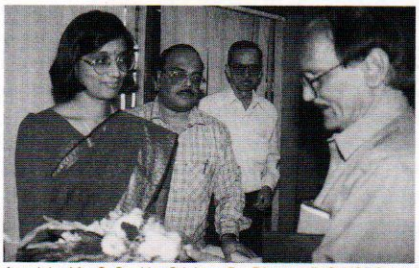
KSPC NEWS

TB is a marker of social inequity and a serious impediment to economic development. Globally, TB is a leading killer of young adults. TB is also a major cause of death in women of childbearing age. Although, 95% of this burden falls in poor countries **-in India alone, TB kills one person every minute,** TB is a global problem that knows no borders. The increasing TB burden is a blot on the consciousness of human kind. What has been a 'problem' is changing into a Disaster as it is a social disease. In India, as in any developing country, poverty fuels TB and TB in turn fuels poverty. This vicious cycle needs to be broken by concentrated efforts of all key players in the field of public health.

The World TB Day is observed on 24th March every year. It is preceded by the TB awareness week observed between 17th Feb to 23rd Feb. Both the events were observed by KSPC.

KSPC, on one hand observed the TB awareness week. On the other hand, this organization has been involved in Continuing Pharmacy Education in the State where TB is either the curricula for a one day program, or it is included as a part of the intensive Continuing Pharmacy Education programs. As a boost to all these efforts, KSPC organised a meeting, which was chaired by **Dr. P. Jagota, Director, National TB Institute, Bangalore at KSPC office**. The other key players represented in the meeting were Mr. Krishnacharya, former Joint Director (TB) of Health & Family Welfare Services and Member of the Central Committee of Karnataka State TB Association.; Mr. K. S. Sundareswara, Hon. Secretary of Karnataka State TB Association ; Dr. Vijayalakshmi from Lady Wellington Hospital who represented Dr. Narayana Murthy, Joint Director of TB;Mr. Suresh Patil, Drug Inspector, who represented the Drug Control Department of Karnataka; Mr. D. A. Gundu Rao, President, Karnataka State Pharmacy Council; Mr. S. B. Gore, Registrar, KSPC; Ms. C. Sunitha Srinivas, Deputy Director, Drug Information Centre, KSPC.


Dr. P. Jagota, Director, NTI


From left to right- Ms. C. Sunitha Srinivas, Dy. Director, DIC, KSPC; Mr. D.A.Gundu Rao, President, KSPC; Mr. S.B.Gore, Registrar, KSPC; Mr. K.S.Sundareswara, Hon. Sec. of KSTBA

KSPC organised this meeting keeping in view the well known fact that Government alone or the health care workers and NGOs playing their part alone, will not be effective in TB control as only Medical treatment cannot achieve this.

Prior to this , KSPC participated in a series of Awareness programs in Bangalore, which included interactive sessions with **45 female link workers** who participated in India Population Project (IPP) organized by Family Planning Association of India, who are also involved in Motivation programs for seeking treatment of TB; **120 adolescents** in the age group of 17-23 years **in quarantine in Central jail, Bangalore ;** 50 women inmates in Central Jail, Bangalore; **at Muneshwara slum, Palace Guttahalli** and also for High School Students in Timmenalli Government School at Govindrajnagar, Vijayanagar.

There is almost universal appreciation of the fact that in spite of available technology for TB control, achievements have been far from satisfactory.

On 24th March, KSPC observed the World TB day at Raj Bhavan, Bangalore. This was again the coming together of all key players in the field under the banner of KSTBA.

Her Excellency, Smt. V.S. Ramadevi, the Governor of Karnataka; Dr. A.B. Maalaka Raddy, Hon'ble Minister for Health & Family Welfare, Govt. of Karnataka & President, KSTBA; Smt. Nafees Fazal, Hon'ble Minister of State for Medical Education, Govt. of Karnataka, participated on the world TB day 2000, wherein the main focus was on **"Forging New Partnerships to Stop TB".**

Mr. V. S. Banavi, a member of KSPC has done a commendable job as a follow up of the CPE on Tuberculosis held in July '99 in Hubli. Contributions from some of the members of KSPC-President, Vice-President & Mr. Banavi; Community pharmacists of Hubli City & other donors resulted in the supply of 54 boxes x 100 tablets of Rimactazid Dispersible tabs, which will cover nine months course for 20 children patients of TB at the District TB centre, KIMS campus, Hubli. The tablets were handed over to Dr. H.M. Betagiri, the District TB officer at KIMS, Hubli.

Mr. V.S. Banavi (left) handing the drugs to Dr. H.M.Betagiri

Ms. P. K. Lakshmi, Dy. Director had undergone a 5 weeks training programme on Drug Information and Clinical Pharmacy Practice from Jan-Feb 2000 at **Austin Repatriation Medical Center, Melbourne, Australia under Mr. Graeme Vernon, Senior Drug Information Practitioner.** This is to facilitate the proper dissemination of Drug Information to healthcare professionals by Karnataka State Pharmacy Council.

Cautionary and Advisory Label List

Drug	Cautionary label/instruction	Dispensing instruction	Additional Instructions to the pharmacist to be given to the patients
Acetazolamide	Do not take more than one *Aspirin* while being treated with this medicine.	Take this medicine in the morning. If you take more than 1 dose a day, take your last dose before 6 p.m.	Monitor serum electrolytes, serum creatinine (renal function).
Acyclovir	Use rubber glove to put the medicine on.(oint)	Complete the course.	
Acitretin	Avoid excessive skin exposure to direct sunlight while under going treatment with this medicine.	Take with food.	Liver function tests (monthly for the first 6 months and every 3 months thereafter). Pregnancy tests on a regular basis in women of childbearing age.
Alendronate	After taking the tablet patient should remain upright and not eat for atleast 30 minutes.	Take in the morning after an overnight fast with a large glass of water.	
Allopurinol	This medicine may affect mental alertness and/or co-ordination. If affected, do not drive a motor vehicle or operate machinery.	Take with or after food.	Avoid beer, wine, alcoholic drinks, sardines, liver, kidney, lentils.
Alprazolam	This medicine may cause drowsiness and may increase the effects of alcohol. If affected do not drive a motor vehicle or operate machinery. Do not stop taking this medicine abruptly unless otherwise advised by your doctor.	Take with or without food.	Do not drink alcohol while taking this medicine.
Alprenolol	This medicine may cause drowsiness and may increase the effects of alcohol. If affected do not drive a motor vehicle or operate machinery.		
Alprostadil	Store frozen.		
Aluminium Hydroxide		Take with food.	Caution in patients with chronic renal failure, especially in children.
Amantadine	This medicine affect mental alertness and/or co-ordination. If affected, do not drive a motor vehicle or operate machinery.	Take with or without food.	Avoid drinking alcohol.
Amiloride Hydrochloro-thiazide	Do not take potassium supplements while undergoing treatment with this medicine unless otherwise advised by your doctor or pharmacist.	Take with or without food or milk.	If taken more than 1 dose a day take last dose before 6 p.m.
Aminoglutethimide	This medicine may cause drowsiness and may increase the effect of alcohol. If affected do not drive a motor vehicle or operate machinery.	This medication should be taken at evenly timed intervals.	This medicine may cause dizziness especially when you stand up quickly. Advice the patient. Dexamethasone should not be taken as a glucocorticoid replacement.
Amiodarone	Avoid excessive skin exposure to direct sunlight while undergoing treatment with this medicine.	Take with food to avoid stomach upset.	Concurrent use of cisapride and class III antiarrhythmic agents is contraindicated.
Amitriptyline	This medicine may cause drowsiness and may increase the effects of alcohol. If affected do not drive a motor vehicle or operate machinery.	May be taken on an empty or full stomach.	This medicine may cause dizziness especially when you stand up quickly. Advice the patient.
Ammonium Chloride Tablets	Consult your doctor. If any of the following occurs : irregular breathing, itching, vomiting, bradycardia, cardiac arrhythmia (due to ammonia toxicity).	Take with food.	Monitor for signs of ammonia toxicity. Contraindicated in Renal impairment; reduced liver function; metabolic alkalosis.

Compiled by Ms. P. K. Lakshmi, Dy. Director, Drug Information Centre To be contd.,

BCG - Do we have to continue to use?

YES

BCG vaccine controversy is basically due to the ignorance about BCG, ethipathogenesis of TB, genesis of the trial and misinterpretation of the latest report on findings of BCG trial, Chingleput. It is worthwhile to recapitulate all the above in brief and examine the sensational news given in the newspaper.

TB is caused by M. tuberculosis (TB bacilli). The susceptible persons, usually children are infected through inhalation of TB bacilli spread by adult infectious ones (smear positive pulmonary TB patients) while coughing and sneezing. High proportions of the susceptible children get infected with TB bacilli. The first infection known as primary infection can occur anywhere in the lungs and the bacilli begin to multiple, followed by accumulation of leukocyte as a part of the immune response. The lymphatics and lymphnodes also get involved. The trio constitutes the primary complex. Within 6-8 weeks, cell mediated immunity develops which is able to contain the infection and the primary complex heals in 90-95% of the children. A positive skin test would be the only evidence of infection. But these lesions harbour few tubercle bacilli with arrested activity. In the remaining 5-10% of the children, the primary complex progresses to disease by dissemination through blood vessels and lymphatics. The disease can occur in any part of the body i.e., lung, pleura, lymphnodes, meninges, bones or kidney, etc. This is known as childhood form of TB or also known as extra pulmonary form of TB. There is always a lurking danger of these virulent TB bacilli flaring up in the future to breakdown into pulmonary disease, which is known as adult type of pulmonary TB. It could be either bacillary excreting bacilli in sputum or abacillary bacilli not excreting bacilli but have active lesions of TB in lungs. BCG vaccination is aimed at establishing a controlled primary complex in the upper area by intradermal injection and attenuated (harmless) liver, bovine strain of tubercle bacilli in an attempt to forestall the infection with virulent M. tubercle bacilli among the uninfected persons. The BCG was given to prevent three things: (i) prevention of second primary complex in the lungs and prevention of primary disease; (ii) there is very less blood vessels eroded in the lungs to other parts of the body leading to fatal miliary TB and fatal and disabling meningitis, pleural effusion, TB of the bone, joint, kidney TB, lymphadenitis, etc., (iii) prevention of flare up of old healed TB lesions of primary complexes in the lungs. This is known as adult type of pulmonary TB caused by endogenous reactivation and is the only form of TB responsible for maintaining the transmission of infection in the community by excreting tubercular bacilli in sputum and are positive by smear examination. BCG was considered to provide all of these three benefits' and the third benefit was most crucial in controlling TB in the community. The gigantic mass BCG campaign in 1951 was started in the length and width of our country with the above objective. The BCG campaign of India was considered as one of the biggest health campaign as never seen before in the world.

In such diverse situations, however, the health planners, policy makers and TB workers were rightly concerned with the findings of BCG trials conducted globally showing varying protection rates (0-80%). The Chingleput TB Prevention Trial was the result of their concern. It was planned meticulously by taking care of all the flaws and deficiencies of earlier trials. The trial costed enormously in terms of funds, manpower and time. It was scientifically designed to study only one part of the BCG efficacy, i.e., does BCG prevent subsequent natural infections in the lungs and reactivation of the healed TB lesion into disease? The findings showed no protection against the adult form of TB. However, the second benefit conferred by BCG i.e., prevention of dissemination and producing the childhood form of TB was not studied. We, at NTI, in a sincere attempt would like to share the facts and give comprehensive picture regarding doubts about BCG vaccination in children. Indian Council of Medical Research, contrary to the news paper report, in its ICMR Bulletin4 clearly stated that BCG vaccine apparently does not prevent infection but interfered with the haematogenous spread of tubercle bacilli which could result in the fatal forms of TB like TB-meningitis, miliary TB and other extra pulmonary forms of TB among new borns and young children. In the same Bulletin, it is also mentioned that there are many scientific reports about the efficacy of BCG preventing disseminated TB and reducing the risk of TB deaths and giving significant protection against TB meningitis / disseminating TB. The fact that BCG also provides variable though significant protection against leprosy increases its value in areas with high prevalence of leprosy as reported in the same Bulletin.

The Government of India revised its policy from giving BCG to 0-20 years to 0-1 year through Universal Programme of Immunization (now known as National Immunization Programme). Chemotherapy of TB became the only preventive tool for TB control. GOI's decision to continue the vaccination for children has prevented millions of children from dying of serious forms of TB e.g., miliary TB, TB meningitis, or making them mentally and physically handicapped. The present practicing physicians have also observed the reduction in the above forms of TB. The transmission of infection is high in India and infection occurs in early age where the dissemination is high. Ironically, recently published second report of the trial showed that BCG has more benefits to the children as it provides some protection against adult form of TB as stated earlier, which is due to endogenous reactivation. There is a great lesson for authors of scientific reporting that it should not be taken for granted that all the readers understand the finer nuance of the medical subjects and for the sake of brief note, should not sacrifice such vital details, which can lead to confusion.

Lastly, in the event of development of a new vaccine, it will be very easy to switch over from BCG as the production facility (BCG laboratory) and infrastructure to deliver the vaccine will remain available.

By **Dr. (Mrs.) P. Jagota,**
Director, National Tuberculosis Institute, Bangalore

BOOK-POST

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