Medical Research in Bhopal

-- Are we forgetting the people?

Concern for man himself and his safety must always form the chief interest of all technical endeavours. Never forget this in the midst of your diagrams and equations.

— Albert Einstein

Preamble

In a tribute to the medical relief workers involved in service to the Bhopal disaster victims the ICMR has noted (1) that a disaster of such magnitude, of such suddenness and caused by the release of a highly toxic chemical methyl isocyanate (MIC) into a densely populated habitat is unparalleled in human history. The doctors, medical students, civil servants, governmental, public sector and voluntary bodies and the people themselves rose to the occasion in a human gesture equally unparalleled.....

In the absence of authoritative information on the released gas; the unwillingness of the company to part with authentic information; the unpreparedness of the local bodies and the Govt health authorities to understand the consequences of the disaster; and the absence of technical or toxicological expertise on MIC among our scientific community, it was imperative that a national body like the Indian Council of Medical Research through its own initiative would have to harness the scientific medical expertise in the country including the local medical college community to meet this challenge. Considering that the affected population was over 2 Lakhs and that the dead were over 6000 (though official estimates are 2000!) this research initiative had to be equally unparalleled in meeting the phenomenal challenges of the world's worst recorded ecological disaster. Do the records of events in the past four months since the disaster bear this our?

The Plan

A report on the first nine days of the Bhopal disaster identified (1) three objectives for the ICMR's research programme:

- 1. To establish a clinical and patho-physiological profile of the hazard which would also provide clues for improved patient management and clinical outcome
- 2. To study the long term sequelae of toxin exposure to lung, tissues, foetus, genes and cancer induction

3. To obtain a basic understanding of the biological alterations associated with MIC exposure.

Strangely enough there is no mention in this report of a strategy by which conclusive research data as and when available would be transmitted to the relief and rehabilitation effort in Bhopal, ie., to the treating doctors and through a health education effort to the affected public.

A report of projectization of ICMR supported research effort (2) lists out 17 study projects which covers acute and long term health effects, lung functions, follow up of children aged 5-15 years, ocular changes, pulmonary and neurological changes, growth and development of new borns, clinical and forensic toxicological studies, radiological studies, genicity, mutagenicity, teratogenicity and chromosomal changes, data management information system, hospital based cancer register, cytofluorometric studies and blood gas analysis. The studies ranging from a time span of 6 months to 5 years would incur a total financial outlay of 1.07 Crore Rupees.

Some surprising omissions in the list were the assessment of psychological stress and its manifestations in the affected families, studies on health of women (not obstetrical outcome but gynecological effects) and the assessment of medico social effects like reduced earning capacity and functional disability which would affect rehabilitation efforts. Though there were references to an epidemiological and community based outlook the research endeavour atleast as on paper did not seem to be a coordinated holistic effort in understanding the total problem but basically a series of vertical research programmes initiated and funded according to the interests of the professors involved in the exercise.

Results

It is four months since the tragedy and about three months since many of the research programmes got underway.

As far as a communication strategy goes three press releases and two lectures but eh director general and a minute of the meeting on the thiosulphate controversy are the only freely available literature on the research (3-8) effort. From these all that any member of the scientific community or the general public can gather are:-

- i. That there is no evidence of irreversible eye damage or blindness
- ii. That the autopsy findings are indicative of severe respiratory damage caused by pulmonary odema and asphyxia
- iii. That studies of exposed persons with lung symptoms/signs have shown obstructive and or restrictive abnormalities

- iv. That a double blind clinical study undertaken using sodium thiosulphate and a placebo has established that sodium thiosulphate administration results in symptomatic improvement and in increased excretion of thiocyanates in the urine. On the basis of clear cut results, the State Govt has been advised to administer sodium thiosulphate to the exposed population and detailed guideline have been drawn up and circulated.
- v. That two visiting psychiatrists have found that 10-12% of the affected individuals attending the medical clinics in Bhopal are presenting with psychiatric manifestations symptoms of anxiety and depression are foremost.

Why this secrecy? or is it administrative over caution?

A more updated report prepared in mid March collating all data as of that date h as again become a casualty in the commitment to secrecy (caution!) and no press release has followed

Issues of concern

An mfc fact finding team which visited Bhopal in mid February at the request of various non-governmental agencies and action groups published a report on the realities of medical research and relief which has been widely circulated and is now well known (9). In mid March an mfc team of 16 members camped in Bhopal and undertook an epidemiological survey which included detailed history taking, physical examination, lung function tests, haemoglobin estimation of a 10 percent sample of a severely affected area and a control area (10).

The team also med decision makers, relief and service providers, medical teams of voluntary agencies and others, apart form undertaking a survey of the people's perceptions of relief services and an overview of the services itself. The findings of the team are being analysed and will be reported shortly (a press release is published in this issue) but the experience of the third week of March in Bhopal strengthened the finding of the earlier fact finding team and identified a whole series of issues of concern in the ways in which research efforts were becoming exploitation of peoples' suffering rather than expressions of support to programmes of human welfare.

1 Lack of dissemination of technical guidelines

The medical relief services continue to be starved of authentic and authoritative scientific medical information to support clinical judgment and patient management. In the absence of clear cut guidelines from the seniors in the profession treatment continues to be adhoc, symptomatic and unstandardised. Findings of autopsies, lab investigations and x-rays and other tests are not available to the treating doctors. Doctors have not been alerted to the fact that a wide range of symptomatology like fatigability, weakness, memory problems are

all part of the MIC syndrome. In the absence of such information peoples' sufferings have often been passed off as malingering or compensation neurosis.

2 Pill distribution

The treatment basically consists of a whole series of pills which are efficiently and actively prescribed to the people in a sort of conditioned reflex. In the absence of proper record linkages each patient is collecting large amounts of pills and not feeling the better for it, apart from the dangers of over drugging. Other forms of care, counseling and non-drug therapies have not been though of.

3 The Thiosulphate controversy:

Even after the ICMR studies establishing the validity of thiosulphate administration and the preparation of clear cut guidelines for its administration, (6, 8) this specific antidote is not being used as effectively as it should be. Is has become a casualty in a medical controversy between cyanogens and carbon monoxide lobbies and the victims rather than being informed and helped are being confused and neglected.

4 Women's health

The mfc fact finding team had highlighted the problems of women who have suffered abortions, still births, diminished foetal movements, suppression of lactation, abnormal vaginal discharges and menstrual disturbances. The studies undertaken by two doctors of mfc reported in this bulletin (11) establish the magnitude and severity of the problem. It, however, continues to be neglected by the concerned authorities.

5 Absence of Health Education efforts

What the other validity of the research efforts, in the ultimate analysis it should get translated into a strategy of health education and awareness building of the affected people. As of date there are no official guidelines of efforts in this direction. The range of areas in phenomenal—advice to mothers of the risk to the foetus and preparation for consequences including options for MTP, advice to couples on contraception till detoxification is over, breathing exercises and antismoking advice to those with fibrosis of lungs, avoidance of overdrugging of pregnant mothers, advice to mothers regarding feeding of infants/children as lactation suppression has taken place, availability of thiosulphate and other medical relief measures. None of this has even been recognised as being necessary.

6 Poor epidemiological and medico social orientation of problem assessment

The general impression is that research and relief efforts are suffering from an acute clinical and institution based orientation rather than a community based epidemiological orientation.

Only if all data is field based and is related to known available morbidity patterns (or comparison with controls) can early problems and special trends be identified and urgently acted upon. The danger of getting into the pursuit of a very neat and fool proof epidemiological planning exercise can be equally counter productive.

7 Lack of informed consent

The people are not being informed about the tests being done. Nor is consent being taken for being included in the studies or for procedures of which many of them are being subjected to. This is a minimum medical ethic.

8 Lack of coordination

This is a universal problem and the ultimate sufferer's are the disaster victims themselves. This incoordination is occurring is occurring between Govt services and research efforts in the medical college, between Govt and non-Govt relief efforts, between voluntary agencies involved in action, relief, rehabilitation and of all these groups with the disaster victims themselves.

While a more detailed report is awaited, we in the mfc appeal to Govt decision makers in Bhopal, medical colleges professors, ICMR scientists, IMA, voluntary agencies, action groups that there are urgent needs to be actively met:

- Need to evolve a bold, imaginative and open communication strategy to all the doctors and health workers (treating the disaster victims) who are presently starved of authentic technical/medical information hampering clinical judgment.
- Need to ensure that research efforts are geared to supporting relief and rehabilitation efforts and not become esoteric exercises for institutional development and career advancement.
- Need to make the commitment to patient care and human welfare primary and to ensure that it does not get bogged down by professional rivalries, inter departmental incoordination, procedural constraints and administrative protocols.
- Need for closer coordination between voluntary agencies, action groups, citizen committees, medical socially sensitive sections of the medical profession and Govt authorities to ensure that the peoples' suffering are not exploited and made pawns in the games played by politicians, multinational companies, and misinformed professional—all symptomatic of an exploitative social system.

An authoritative Lancet editorial (12) had mentioned that 'In a year's time we will have learned a lot more about methylisocyanate at an appalling price'. With the prevalent medical anarchy in Bhopal in relief and research, this price may be immeasurable.

—MFC team, Bangalore

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The K.E.M. Study

Results of a limited but thorough study of 113 MIC affected people carried out at K E M Hospital (the only available comprehensive source of hard medical evidence of the degree of destruction caused by MIC).

SAMPLE

Relatively mildly affected middle class people living in pucca houses at a distance of 2 kms from Union Carbide Plant who voluntarily presented to K E M Hospital, Bombay – 8 to 53 days after exposure to MIC.

Salient findings

- Breathlessness on exertion 95%
- > Persistent dry cough 97%
- > Throat irritation 66%
- > Chest Pain 68%
- > Vomiting 42%
- > Muscular Weakness 22%
- > Altered consciousness 28%
- > Low vita capacity of lungs 27% (less than 60% of normal)
- > Impaired oxygen uptake 55%
- Central airway obstruction 43%
- > Respiratory alkalosis 59%
- Abnormal low oxygen pressure in blood 23%

- > Neurological conditions such assensory motor loss, depression, tremors, loss of concentration, irritability in a significant number of cases.
- > W-ray—97% had abnormal findings
- > Carboxyhaemoglobin—96% high
- > Methaemoglobin—79% high
- > Percentage showing no improvement at all despite medication and carefully administered treatment 30%.
 - —'Bhopal's unending tragedy'

Praful Bidwai Times of India, March 25-27, 1985

Women's Health

——an epidemic of gynecological diseases

Sample study

218 women in field clinics established by a gynaecologist in Bhopal (114 gas affected group and 104 controls).

Salient features

(C = Controls)

- Leucorrhoea 90% (C=27%)
- Pelvic inflammatory disease 79% (C=27%)
- Cervical erosion and endocervicitis 75% (C=44%)
- Excessive menstrual bleeding 31% (C=1.2%)
- Suppression of lactation 59% (C=12%)
- All above are statistically significant when compared with incidence in controls.
- Spontaneous abortions (7); still births (4); incomplete abortion (1); and threatened abortion in affected group, Nil in controls
- Severe pallor in control group 36% and in affected group 3%

Conclusions

The exposure to the gas has produced excessive gynaecological disease in women apart from suppression of lactation and pregnancy wastage.

These aspects are presently unstudied and uncared for. Immediate relief and research need to be initiated for the silent suffering women.

Suggestions

- 1. Need to study gynaecological diseases
- 2. Need for field clinics and involvement of female paramedics
- 3. Need to health educate women on their gynaecological problems.

- 4. Advise on supplementation/weaning foods for mothers who have suffered lactation suppression
- 5. Information to women regarding risk to the foetus
- 6. Need for voluntary agencies and women's organisations to help slum women build pressure on authorities to implement care services

—Rani Bang (Wardha)—Mira Sadgopal (Hoshangabad)

(Copies of detailed study reports I & II are available from Rani Bang, Gopuri PO, Dist. Wardha - 442114)

PRESS RELEASE

The MFC Bhopal Study

The Medico Friend Circle, an all-India group of socially conscious doctors and health workers has just completed a systematic study of the continued effects of toxic gas in two bastis in Bhopal. The observations of the study conducted between March 18-25 in the highly affected Jaya Prakash Nagar and the less affected Anna Nagar ace yet to be fully analysed. However, the initial findings definitely indicate that (i) the affected population is already showing signs of reduced breathing and working capacity which, is likely to be permanent unless remedial measures are urgently introduced; (ii) pregnant women who had been exposed to the gas in the first three months of pregnancy or have become pregnant since the disaster have still not been informed about the possible dangers to the foetus. Moreover, detoxification measures recommended by ICMR over a month ago the administration of sodium thiosulphate has not been implemented. The Medico Friend Circle is deeply concerned and agitated about the situation.

Reduced breathing and working capacity among the affected population

The Medico Friend Circle's study team has observed that men are not able to go back to work because of breathlessness on accustomed exertion (exertional dyspnoea). Those who have returned to work report definitely reduced working capacities. Most women find it difficult to carryon their usual household chores. The team has noted with particular concern that very few of the children can even play or participate in normal physical activity in the affected bastis.

It is well known that a large proportion of the MIC affected population is likely to develop fibrosis of the lungs (development of scars) following inflammation of the lungs due to irritation. This condition permanently affects breathing and hence working capacity. Such a condition is already in evidence in the population covered by the MFC study.

Simple breathing exercises are known to help to reduce this disability. Information about these exercises must be made widely known and their importance stressed.

Mass detoxification by sodium thiosulphate

More than a month ago the ICMR had recommended the administration of sodium thiosulphate for detoxification of all patients suffering from symptoms of MIC poisoning. This recommendation was based on conclusions drawn from a double-blind clinical study. But as yet, there appears to be no strategy 'in action with regard to administration of sodium thiosulphate to 'the vast majority of affected people. Only a tiny fraction consisting of the seriously ill are receiving the injection.

MFC emphatically feels that as suggested by the 'ICMR, all patients suffering from symptoms of MIC poisoning' should be urgently administered sodium thiosulphate so that their suffering is reduced and they may go back to work. This service and other medical facilities should be urgently provided in a decentralised way, close to the 'bastis in affected areas.

The insight that sodium thiosulphate may well be effective was known even in the first week after the disaster. It is extremely disturbing and deplorable that decisions on vital issues like

this which affect the lives of thousands of people should have been so long delayed. Even more shocking is the fact that even now, a month after the recommendation was publicised, mass detoxification of MIC victims has not begun.

Possible risks to the foetus

Another, disturbing feature is that pregnant women who have been exposed to MIC have not been given any advice regarding the possible risks to the foetus. Given the fact that the first three months of pregnancy is the most sensitive period, it is likely that these Women as well those who became pregnant immediately after the disaster are likely to give birth to deformed babies, since MIC or its breakdown products are very reactive chemicals. Moreover many of these women have received several types of drugs when as a rule no drug should be given in the first three months for fear of drug induced deformations. Some of these drugs, especially steroids are known to cause deformities.

There is an urgent need to inform people, especially women about these dangers and to allow them the option of medical termination of pregnancy. Adequate and free facilities should be made available to those women who opt for it without coercing them to undergo sterilization. Further, those couples who have lost children and want reversal of sterilization must be offered these facilities free of charge.

Doctors belonging to MFC had pointed out these dangers in a earlier note sent to the concerned authorities a month ago. But to date nothing seems to have been done.

Many of these women have by now crossed the five-month limit of pregnancy beyond which MTP is unsafe. But there are some who can still terminate their pregnancy although the risks are greater than in the first weeks. Facilities for ultrasonographic examination should be made available to these women immediately to detect gross abnormalities in their foetuses.

That this is not being done is a reflection, of the indifference of health authorities, towards the health problems of poor women. Moreover MFC feels that the ICMR study designed to follow up these women on a long term to assess the percentage of deformities without informing women about the possible risks or the advisability of MTP is unethical. The dangers to pregnancy are well known and poor women should not be used as guinea pigs in medical research.

Contraceptive advice to affected couples

Most of the MIC-affected population is still suffering from symptoms of cyanide—like poisoning indicating therefore the persistence of the biochemical changes with have occured due to MIC poisoning. It is safer to avoid pregnancies till complete detoxification has taken place. Since a large proportion of the women are suffering from menstrual disorders and other gynaecological problems, male contraceptives (Nirodh) should be recommended rather than Copper T or oral contraceptive pills by the women.

We demand that the health authorities should give serious and urgent consideration to the issues raised here.

Dear Friends...

* A lot of Medical Representatives visit me in my small hospital. Brimming with enthusiasm, they let loose a torrent of words, a mixture of sales-talk and pharmacology mostly sincere, not usually accurate.

One enthusiastic fellow tried to sell me a new antibiotic ointment containing Fusidic acid. He showed me pictures of a patient with eczema on the face, before and after treatment. The "before" picture shows the lips and chin of "a 14-year-old girl with extensive eczema" The "after" picture shows the lips and chin of a shaven male Either the advertisement is a fraud or Fusidic acid has strong androgenic properties.

Another poor Medical Representative gave me the usual lecture, then left behind a lot of samples. Unfortunately the B—Complex capsules, though manufactured only a

month ago, were spoilt.

Now all drugs are bought only after consultation between the Pharmacist, the Administrator and myself. The B--Complex capsules- were discarded. The other samples are given freely to deserving patients. I have removed all drug advertisements from our hospital, including calendars. But in a prominent spot in the Pharmacy, you will find the advertisement on Fusidic acid-a constant reminder, to the Pharmacist and myself, of the treachery of drug advertising.

Newton Luiz Kerala.

* It was heartening to see such a large number of people, who believe in the social cause at the meeting in Bangalore.

I shall like to contribute in MFC's programmes. Now a few opinions. During the discussions on national tuberculosis programme, it became evident that the borne work was not done properly and the active members were not prepared sufficiently. This is a sad thing because I am sure that many of the participants had come to the meat for getting a guideline on which they could work after returning to their field. However, this promise was not fulfilled.

Secondly, the sessions were too long to be comfortable. Not only it obstructed the enthusiasm of participants but also did not allow for a purposeful acquaintance with each other. I feel that for such an activity as MFC has undertaken, development of personal communication among various groups are vital for effective working and spreading the movement. It should be seen that the sessions are not extended beyond 2-3 pm and remaining time be Left for group interactions. I have learnt a lot during my talk with groups of participants. Though there not much time for this, I can say that they were more informative than the lengthy sessions of the MFC on NTP critique. I am sure that participants would learn more by informal interaction with each other and provisions should be made to encourage such activities.

—Arvind Jha, Bombay.

Scientific Medicine

Whenever there is a discussion on the different pathies, I am confused by the profusion of terms to describe the system of medicine that I use in my practice. Allopathy, western medicine, modern medicine, and scientific medicine are all terms used to distinguish our system of medicine from the others— Ayurveda, Siddha, Unani, Shamanism and Homeopathy. Perhaps this confusion and profusion of terms comes from muddled thinking.

The word 'allopathy' is outdated and should never be used by us; we should not define our system of medicine in terms of someone else's incorrect perception of our system. Several MFC members have pointed out that allopathy is a misnomer. The aim of most of our treatments is not to produce an opposite effect to the disease at all. If homeopaths want to continue to use the word to distinguish their system from ours, let them do so.

Western medicine is another popular term, but it is a bit limiting. It fails to distinguish our medicine from the 19th century pseudoscience homeopathy. The practice of Unani also originated in the west. Besides lending an unnecessary foreign name to our medical system, it no longer describes the practice as it exists in India.

The term modem medicine is also used. Although most of the knowledge used by us is new, it is not the distinguishing characteristic of this knowledge. Two hundred years have passed since digitalis was first used for dropsy. Modem is a better emotive term than a descriptive one.

The best term to use is scientific medicine. This contrasts our practice with the

traditional systems of Ayurveda, Siddha, Unani, Shamanism; and even Homeopathy.

Scientific medicine includes all aspects of healing that are proven (by scientific method) to do more good than harm. Thing scientific method includes the powerful experimental tool of the clinical trial. The use of steamed sterile banana leaves as dressings for burns is not western, modern, nor allopathic. It is scientific medicine employing the scientific principle of antisepsis and proven by clinical trial to do more good than harm. The use of Rauwolfia serpentina for high blood pressure is also described in ayurvedic practice, but has become part of our present practice of scientific medicine only as reserpine has been proven to lower blood pressure, and treating high blood pressure- has been shown to do more good than harm. Open-minded practitioners of scientific medicine will have no difficulty integrating proven methods from the traditional systems into scientific practice.

If we think clearly, perhaps we will begin to talk more clearly. We will begin to hear less of the other pathies and will begin to hear more of the most important pathy in the healing arts — empathy.

Jamie Uhrig — Mitraniketan

Introducing the Third Anthology

Under the Lens – Health and Medicine

Within ten years of its inception, the Medico Friend Circle (MFC) has become a familiar name in various circles of development workers. It is in response to this growing interest in MFC's analyses of health care that we venture out to offer yet another anthology of articles selected from our monthly Bulletin.

This book does not carry the same degree of perplexity, which its two predecessors did. For, amidst the intricate scenario of problems, solutions, and problems arising out of solutions, one discerns certain well-defined and definite areas of focus. The focus is at times a bit unsteady and not so definite as to generate dogma, not yet, we are still searching for solutions, and have become wise enough to admit, **no the solution**.

After the mad rush of critiques, arguments and counter-arguments, which characterized the earlier two books, particularly the first one, we paused to take a deep breath. A stage had arrived for some calm thinking. This was, in a way, reflected in the narrowing down of areas of focus, and the near total absence of debate in issues Nos. 56—95 of the MFC Bulletin, which formed the source for this anthology. This was a period for reflection, reassessment and re-structuring of ideas.

Thus, definite areas started to come under focus. What one sees Under The Lens is not the total picture, but a few definite foci in it. Moreover, is not what one sees under the lens, only an image? But the image helps in understanding the situation, in arriving at a diagnosis and thus in finding solutions.

We show you in Under The Lens, some of the pathogens and the pathology: the wrong paths in health care, traps on seemingly right paths and a frightening pattern of "no health". The book contains admission of self-made mistakes (The other side of Health Education, Role of the V H W); the myths in community health (People's participation,

community participation in Health Care; Health For All by A. D) the wrong directions on the national highway of health (Health Care vs The Struggle for life; Misuse of Antibiotics; Is BCG vaccination useful? How successful are supplementary Feeding Programmes?); the subtle and not so subtle, pressures of international politics on health (Research A Method of Colonistion; Multinationals in Drug Industry).

In line with the earlier two books, the present one is also a potpourri of different aspects of health interests (but always deep) of MFC. TI covers community health (questioning on the way, whether there is a homogenous community, what is meant by people and by Health for All), but policies, clinical medicine nutrition, contraception and much more. There is a heavy emphasis on various aspects of drug policy and therapeutics. The analyses by Anant Phadke (Multinationals in Indian Drug Policy), clearly bring into focus the growing concern of all genuine thinkers regarding the dangerous and erroneous drug policies in the Third World.

An orthodox reader may wonder how a Caste War Among Medicos or Minimum Wages for Agricultural Labourers could ever find a place in a debate on health. This only helps to emphasize MFC's main refrain that health is not a medical subject but a socio-economic topic, and that no true health worker can isolate himself (or herself) from the current socio-cultural and politico-economic forces. This understanding reveals the other sides of the coin too-finances are not the main constraint in achieving Health care for All (Family Planning & Problem of Resources; Kerala, A Yardstick for India).

This book is an attempt to bring under focus issues which have hitherto been missed or ignored and to adequately magnify them to put them under proper perspective. We hope you will welcome it as enthusiastically as you did its predecessor.

Kamal S. Jaya Rao.

Drugs

Consumer Alert – Action – Welcome

9th April 1983

"Although Clioquinol can severely damage the nervous system and has injured more people than any other drugs, it is still being sold in about 100 countries around world.

Ciba-Geigy the biggest producer of Clioquinol has at last decided the phase it out from the world market within 3 to 5 years. But the exposes large populations to unacceptable risk for yet another 3 to 5 years and offers no benefits. We urge all national drug regulatory authorities and the World Health Organisation to ensure that the production and sale of oral preparations containing Clioquinol or any Hydroxyquinoline is stopped **now**."

26th November, 1984

In October 1982, CIBA-GEIGY had published a new policy on control of diarrhoeal diseases. This policy included the announcement of the worldwide gradual phasing out in three to five years of Enterovioform, Mexaform and others, drugs which have been used for the control of diarrhoeal disease for decades. However, in connection with a series of SMON- cases in Japan, these drugs became the object of a public, controversial discussion concerning drug benefit/risk.

Within keeping of the announced policy, sales of the products concerned have been discontinued since October 1982 in some 90 countries. The gradual phasing out of these drugs has taken place with the approval of the National Health Authorities. The World Health Organization in Geneva was regularly informed of the present state of developments.

Today, the method of Oral Rehydration offers a significant alternative therapy in the control of Diarrhoeal Diseases—particularly in the field of Infant Diarrhoeal Diseases. Ciba-Geigy has decided to account the present concepts and developments in the field into a new policy, thereby abandoning the use of Clioquinol—containing and related drugs. Consequently, Ciba-Geigy will accelerate it original policy on controlling diarrhoeal diseases, whereby the supply of the Anti-Diarrhoeal products will be stopped by the end of the first quarter of 1985.

-Press release by Ciba-Geigy

30th November 1984.

The President of IOCU, Anwar Fazal, today welcomed the news that Ciba-Geigy is abandoning the worldwide supply of its Clioquinol containing and related drugs by the end of March next year.

Clioquinol and related drugs—the group of Hydroxyquinoline — have been proven responsible for a serious nerve disease "SMON" (sub acute—myelo-optic-neuropathy) which often leaves people severely crippled, blind or both. There have been more than 10,000 "SMON" victims in Japan alone in the late 1960s.

"We hope that this marks the beginning of a new assertiveness on the part of Ciba-Geigy to have nothing but the highest ethical standards in the marketing of its products," say Anwar Fazal.

The IOCU President added that there is a clear moral responsibility on all manufacturers of oral Clioquinol and other Hydroxyquinoline containing drug to follow Ciba-Geigy's example and stop the production and sale of these products without any further hesitation. "We will insist on the recall of such drugs already distributed to retailers and there is no excuse whatsoever for Govt's to allow this drug to be in circulation".

NOTE: — Malaysia has banned this drug. It is however widely available and used in Indonesia, Thailand and **India**. The two commonest preparations are Mexaform and Enterovioform.

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View and opinions expressed in the bulletin are those of the authors and not necessarily of the organization.

Annual subscription – Inland Rs. 15.00
Foreign: Sea Mail – US\$ 4 for all countries
Air Mail: Asia – US\$ 6; Africa & Europe – US\$ 9; Canada & USA -- \$ 11
Edited by Ravi Narayan, 326, 5th Main, 1st Block, Koramangala, Bangalore-560034
Printed by Thelma Narayan at Pauline Printing Press, 44, Ulsoor Road, Bangalore-560042
Published by Thelma Narayan for Medico Friend Circle, 326, 5th Main, 1st Block,
Koramangala, Bangalore-560034