

Letter from Mumbai

THE GLYCEROL TRAGEDY REVISITED

Administration of contaminated glycerol had led to the death of 14 patients at the J.J. Hospital in Mumbai between 21 January and 7 February 1986. The state government appointed Justice Bhaktawar Lentin under the Commissions of Inquiry Act, 1952 to probe into the tragedy. (For a review of Justice Lentin's report on these deaths see *Natl Med J India* 1988;1:144–8.) Ten years later, on 1 December 1997, *The Indian Express* carried a news item entitled 'Lentin report on J.J. deaths lies in cold storage':

'The commission had passed strictures and recommended immediate departmental action against the then Dean R. S. Chandrikapure, S. V. Shaligram (Professor and Head of the Department of Pharmacology), V. G. Deshmukh (Medical Superintendent), A. K. Jamadagni (pharmacist), S. B. Satalkar, N. D. Dharap, P. K. Torvi, S. M. Dolas, P. K. Kochar and B. K. Bijamwar (all from the department of industries). In addition, the commission had recommended that the Anti-Corruption Bureau (ACB) should be directed to hold a high-level probe against the officials of the industries department.

'... However, the state government has cold-shouldered ... the recommendations.

'... The then health minister Bhai Sawant, former health minister Baliram Hiray, officials from the Food and Drug Administration (FDA), R. D. Kulkarni, V. C. Sane, S. D. Bhirud, V. D. Deshmukh and N. D. Kulkarni were liable to be proceeded against for charges of corruption after appropriate inquiries were made by the ACB or any other competent investigating authority on its behalf.

'As per official records, though the FDA officials were suspended for some period, most of them were reinstated with back wages after they were acquitted on the basis of departmental inquiry. Shaligram had failed to withdraw the contaminated drug though it was brought to his notice. The commission held him *grossly negligent* in not providing proper circulars to the department. However, the departmental inquiry found no substance in the charges levelled against him. In most of the cases, the departmental inquiry officer had given almost similar findings. "Such findings by the departmental inquiries make a mockery of the commission's recommendations," remarked a senior official of the law and judiciary department.'

Mr Justice Lentin passed away on 22 April 2000 without seeing any disciplinary action against those indicted by him.

My thoughts were directed to this double tragedy (to lives and to justice) by a report in *The New York Times* on 6 May 2007. I quote from this report:

'The kidneys fail first. Then the central nervous system begins to misfire. Paralysis spreads, making breathing difficult, then often impossible without assistance. In the end, most victims die.

'Many of them are children, poisoned at the hands of their unsuspecting parents.

'The syrupy poison, diethylene glycol, is an indispensable part of the modern world, an industrial solvent and prime ingredient in some antifreeze.

'It is also a killer. And the deaths, if not intentional, are often no accident.

'Over the years, the poison has been loaded into all varieties of medicine—cough syrup, fever medication, injectable drugs—a

result of counterfeiters who profit by substituting the sweet-tasting solvent for a safe, more expensive syrup, usually glycerin, commonly used in drugs, food, toothpaste and other products.

'Toxic syrup has figured in at least eight mass poisonings around the world in the past two decades. Researchers estimate that thousands have died. In many cases, the precise origin of the poison has never been determined. But records and interviews show that in three of the last four cases it was made in China, a major source of counterfeit drugs.

'Panama is the most recent victim. Last year, government officials there unwittingly mixed diethylene glycol into 260,000 bottles of cold medicine—with devastating results. Families have reported 365 deaths from the poison, 100 of which have been confirmed so far. With the onset of the rainy season, investigators are racing to exhume as many potential victims as possible before bodies decompose even more.

'Panama's death toll leads directly to Chinese companies that made and exported the poison as 99.5 per cent pure glycerin.

'...The counterfeit glycerin passed through three trading companies on three continents, yet not one of them tested the syrup to confirm what was on the label. Along the way, a certificate falsely attesting to the purity of the shipment was repeatedly altered, eliminating the name of the manufacturer and previous owner. As a result, traders bought the syrup without knowing where it came from, or who made it. With this information, the traders might have discovered—as *The Times* did—that the manufacturer was not certified to make pharmaceutical ingredients.

'An examination of the ... poisoning cases last year—in Panama and earlier in China—shows how China's safety regulations have lagged behind its growing role as low-cost supplier to the world. It also demonstrates how a poorly policed chain of traders in country after country allows counterfeit medicine to contaminate the global market.

'...Beyond Panama and China, toxic syrup has caused mass poisonings in Haiti, Bangladesh, Argentina, Nigeria **and twice in India.**' (emphasis mine)

The New York Times report added: 'In Bangladesh, investigators found poison in seven brands of fever medication in 1992, but only after countless children died. A Massachusetts laboratory detected the contamination after Dr Michael L. Bennish, a paediatrician who works in developing countries, smuggled samples of the tainted syrup out of the country in a suitcase. Dr Bennish, who investigated the Bangladesh epidemic and helped write a 1995 article about it for *BMJ*, formerly known as the *British Medical Journal*, said that given the amount of medication distributed, deaths "must be in the thousands or tens of thousands. It's vastly underreported," Dr Bennish said of diethylene glycol poisoning.

'Doctors might not suspect toxic medicine, particularly in poor countries with limited resources and a generally unhealthy population, he said, adding that most people who die don't come to a medical facility.'

There is little hope that the contamination can be stopped at its source. *The New York Times* report frankly stated: '“Chinese officials we contacted on this matter were all reluctant to become involved,” the American Embassy in Beijing wrote in a confidential cable. “We cannot be optimistic about our chances for success in tracking down the other possible glycerine shipments.”'

Under these circumstances it is imperative that we pay special attention to the recommendations made by the US Department of Health and Human Services (Food and Drug Administration) Center for Drug Evaluation and Research this May.¹ These were made to alert pharmaceutical manufacturers, pharmacy compounders, repackers and suppliers to the potential public health hazard of glycerine contaminated with diethylene glycol in the hope that the detection of such contamination could help avert future tragedies. The guidelines were based on their analyses of earlier catastrophic use of contaminated glycerine.

‘These cases reveal the following similarities:

‘The pharmaceutical manufacturers of the syrups that contained contaminated glycerin did not perform full identity testing on the glycerin raw material, including tests to quantify the amount of DEG present and to verify the purity of the glycerin received.

‘The pharmaceutical manufacturers of the syrups containing contaminated glycerin relied on the certificate of analysis (COA) provided by the supplier.

‘The origin of the glycerin was not easily apparent from the COA. The COA obtained by the pharmaceutical manufacturers of the syrups was often a copy of a COA on the letterhead of the distributor and not the COA provided by the manufacturer of the glycerin. The chain of custody or distribution history of the glycerin was also not readily known because the glycerin may have been sold several times between its manufacture and its use in medicinal syrup or other drug product.

‘As a result of these practices, DEG-contaminated glycerin entered the pharmaceutical raw material supply chain.’

The US Department of Health and Human Services (Food and Drug Administration) Center for Drug Evaluation and Research recommends the use of analytical testing procedures on all lots of glycerin such as the two-part test, (i) using ‘infrared absorption’ and (ii) using gas chromatography listed in the *United States Pharmacopeia* monograph for glycerin. One alternative procedure is a thin-layer chromatography (TLC) method published in the *Journal of AOAC International*.

Our ignoring these recommendations will certainly result in further deaths—especially of the poor.

POSTSCRIPT: On 9 July 2007, Chinese media announced that Zheng Xiaoyu, former director of China’s State FDA (SFDA) was executed for corruption. Zheng was convicted of taking bribes worth 6.5 million yuan (\$850 000) from 8 firms. This is the first time since 2000 that China has imposed death sentence on an official of his rank.

Zheng, head of the SFDA from 1998 to 2005, was sentenced on 29 May 2007 and his appeal was heard in June 2007.

Investigators found that Zheng and his subordinates abused new rules in renewing drug production licences to squeeze kickbacks from companies, spurring the spread of fake drugs in a system plagued by corruption.

Last week, a court handed down a suspended death sentence on one of Zheng’s subordinates on the same charges. Another senior SFDA official was jailed for 15 years in November 2006 for taking bribes and possession of an illegal gun.

‘The nest of corruption in the SFDA has done incalculable harm to the state and people’, the *Procuratorial Daily* said.

The contrast between this action and the inaction of the Government of Maharashtra is noteworthy.

THE MAHARASHTRA MEDICAL COUNCIL: RENEWAL OF REGISTRATIONS

For the first time since 1965, I received a letter from this august

body on a matter unconnected with elections to it. Thus far, it has ignored all doctors registered with it, deeming it unnecessary to involve us in any dialogue on matters pertaining to health, the care of the ill or education of the public on matters medical. Nor have we been favoured with its own views on topics such as the sterilization of the mentally handicapped, female foeticide, forceful feeding of prisoners, corrupt doctors, medical consultants facilitating hospitalization of politically powerful and the rich sentenced to prison and the lack of medical ethics as a subject in the curriculum of medical colleges.

The letter we received recently asked us to renew our registration with it. Towards this end we were to fill in a form which required, among other details, attested copies of the registration certificates (MB,BS and specialization) earlier issued by itself and two passport-sized photographs with name and registration numbers on them. Why they needed attested copies of their own registration certificates remains a mystery unless, of course, as is not uncommon in such august organizations, ‘the files are missing’.

Oh, yes, they also needed a demand draft for Rs 500 for re-registering us. Cynics in the medical profession were quick to ask why the simple task of re-registration cost Rs 500 as they could think of no other expense incurred by the Council on any of us.

My application form for re-registration and demand draft for Rs 500 and those of 3 colleagues were received by the Council in February 2007.

Since patience went unrewarded over the next two months, my colleagues and I ventured to enquire with the Council as to the fate of our applications.

The conversation in the office of the Council went somewhat as follows:

We: ‘Could you please let us know the fate of our applications? Here are the copies.’

Clerk: ‘I will have to look up.’ (The computer on the table was then activated.) ‘Hmm. Please give me the old registration numbers of each of you.’

These were duly supplied separately although they were printed on the copies we had proffered.

Clerk: ‘The registration numbers on two forms are wrong. Please supply the correct numbers.’

We: ‘This is not possible as we have given you the attested photocopies of your own registration certificates.’

Clerk: ‘Well my computer is not accepting these numbers.’

To cut a long story short, we were eventually promised our new registration documents in a few days. The application for re-registration sent on 14 February 2007 eventually elicited a response in print on 26 May 2007, stating that we have been re-registered for a period of 5 years from 1 March 2007. This letter includes an ominous paragraph: ‘It is stated that Medical Practitioners/ Graduates registered with this Council will be required to approach this Council two months in advance before expiry of the above period of five years for next renewal of registrations as per section 23(C) of the Maharashtra Medical Council (Amendment) Act, 2003.’

I have already made a note in my diary and hope to be prepared for the next ordeal in January 2012, if I’m still around then!

REFERENCE

- 1 US Department of Health and Human Services (Food and Drug Administration) Center for Drug Evaluation and Research: Guidance for Industry. Testing of glycerin for diethylene glycol. www.fda.gov/cder/guidance/index.htm (accessed on 1 June 2007).

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