The eyes of Bhopal

Survivors called it "devil's night".

When the yellow cloud drifted silently into the huts and alleys of working-class Bhopal, methyl isocyanate gas seared eyes, throats and lungs. Reports indicated that perhaps 40,000 people had suffered serious damage, with 20,000 blinded.

But this was an industrial accident without precedent — the scale was bigger and toxicity levels higher. No one knew the impact in the long run — for instance, the effect of the gas on the human eye.

In the first few hectic days, an emergency treatment centre was set up, giving the poor among Bhopal's million people their first real access to eye care. Teams of experts examined thousands, administering atropine (from belladonna) and antibiotics. A band of scarring was commonly observed: victims had squinted their eyes, leaving only a strip exposed to the gas.

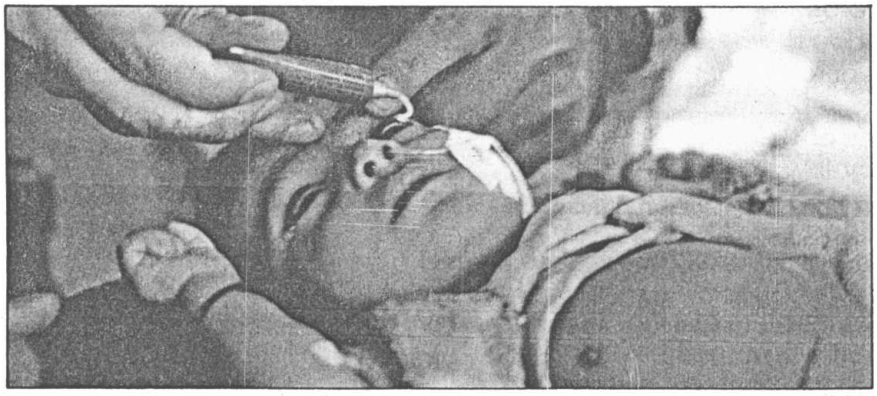
Obviously, first aid was not enough. The Royal Commonwealth Society for the Blind quickly announced plans to create the Bhopal Eye Hospital. Operation Eyesight Universal, the Calgary-based voluntary agency, was a partner from the beginning, providing funds from public donations in Canada and a $100,000 CIDA grant.

A study was launched at once to track any long-term complications from exposure of eyes to the gas, based on eight clusters of patients from badly-hit neighborhoods, and two from outside the affected area. "Some 800 people are under surveillance," said Art Jenkyns, President of Operation Eyesight Universal, after a visit. "Their histories have been recorded and any developments or changes are noted."

After two years, most of the news from Bhopal — about eyes, at least — is encouraging. Atropine, which dilates the pupil and blurs sight, accounted for the early reports of vision-loss — and the scars seem to have sloughed off and healed naturally. In fact, up to this point, it appears that the gas has not blinded or put at risk the vision of even one single person.

The Bhopal Eye Hospital, however, is far from idle. In its first year, operating from rented premises near the Union Carbide plant, it provided free examination and treatment for 18,242 patients. Surgery was carried out for 274 people suffering from cataracts or glaucoma, other treatment was offered through Red Cross clinics, and the baseline study was pursued. This badly-needed work is continuing under Dr. M.K. Ajwani, and plans are moving ahead for a permanent hospital, to be built on land contributed by the government of Madhya Pradesh state, with financial help from the Royal Commonwealth Society for the Blind and Operation Eyesight Universal.

Baby being treated for eye injury. (© 1984, Dilip Mehta/Contact)



Urbanization

Only 14 days before Bhopal, Mexico City suffered a major industrial disaster as liquefied natural gas tanks with a capacity of 80,000 barrels exploded at the San Juan Ixhuatepec storage facility of Petroleos Mexicanos, killing 452 people and injuring more than 4,000 others.

The history of the 20th century demonstrates that we are all living close to Bhopal. And death does not discriminate. It stalks everywhere from Germany to India to Canada to Mexico.

One of the first major industrial accidents of the century took place at Halifax, in Nova Scotia, on December 6, 1917. A freighter carrying about 1,000 tons of ammunition collided with another ship, setting off explosions that destroyed part of the city. Some 1,650 people were killed.

Since then industrial disasters have become commonplace. Some 560 people were killed by a chemical explosion near Frankfurt in Germany in 1921. About 600 people were killed when a fertilizer-carrying freighter exploded in 1947, destroying most of Texas City, Texas.

Many will also remember Seveso, Italy, where the population was exposed to highly toxic materials — or Mississauga, in Ontario, where three railcars carrying propane and toluene exploded in 1979, causing the city to be evacuated.

Seveso, Mississauga, Bhopal and all other major industrial accidents of our century are not isolated incidents; they depict a pattern. They are a symptom, the tip of the iceberg of a problem closely related

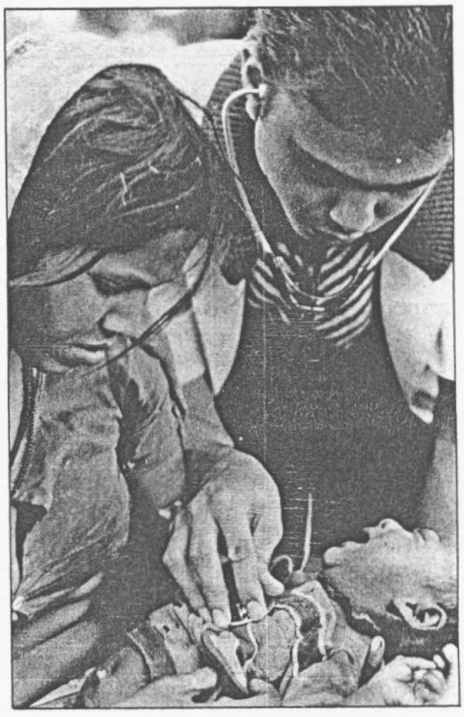
to our industrialized societies. In addition, there are numerous 'slow-motion Bhopals' where unseen and chronic poisoning from industrial pollution causes irreversible health damage as well as having serious socio-economic consequences for innocent people.

Commenting on the 'Cancer Atlas' maps, Prof. David Kotelchuck of Hunter College once told the London newspaper *The Guardian*: "Show me a red spot on these maps and I will show you an industrial centre. In the U.S.A. for instance, it's not Pennsylvania that is red. It is just Philadelphia, Erie and Pittsburgh. In West Virginia, there are only two red spots. And they happen to be exactly at the industrial belts around the Ohio river and the Kanawha valley. It is the same story wherever you look".

When we look closely, our industrial world seems frightening. Industry never stops creating new chemicals. Scientist know the formula to 13 million of them. Some 50,000 to 80,000 chemicals are used commercially — and, each year, from 500 to 1,000 new ones are designed. We find the way to create these potentially toxic and polluting products, but we do not devote enough efforts and resources to controlling them or protecting ourselves against them.

Let us hope that it will not take another Bhopal for us to learn lessons and locate industrial plants away from population centres, observe proper safety measures and approach further industrialization with a focus on the human dimension.

Sundeep Waslekar is a freelance journalist living in Bombay.



Many survivors, including children, suffered irreversible lung damage.
(© 1984, Dilip Mehta/Contact)

Most of the victims in Bhopal were poor people squatting right next to the plant. (© 1984, Dilip Mehta/Contact)