

EDITORIAL

Hepatitis B outbreak in Gujarat: a wake-up call

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One of the biggest epidemics of Hepatitis B in India occurred in February-March 2009 (1). The centre of the outbreak was Modasa taluka in Sabarkantha district, Gujarat. Within a few weeks, nearly 240 people were reported to have been affected by Hepatitis B and over 70 succumbed to the disease. The National Institute of Virology in Pune identified the disease to be due to a particularly virulent mutant. Statements issued by health department officials pointed to the use of recycled and unsterilised syringes and injection needles as the means of transmission of the infection. Many doctors and medical scrap dealers were arrested. However, there does not appear to be any systematic epidemiological investigation that definitively links the affected people to the hospitals where the arrested doctors work. Though we cannot be absolutely certain, it is quite likely that many of the affected people belong to vulnerable sections of society who may seek care from unregistered practitioners or small clinics which often overlook safety precautions. We also do not know whether the affected people were also tested for HIV, which can spread in exactly the same way as Hepatitis B.

Emerging from the darkness that has engulfed the lives and families of the affected people is the infamous nexus of medical waste pickers who collect and sell used syringes from hospitals and clinics, underground recycling gangs who buy them by the kilogramme and channel them to some unscrupulous pharmaceutical companies or small scale industries, who in turn repack the syringes without sterilisation and sell them to the unsuspecting public and, possibly, to hospitals as well. Needless to say, the public is outraged that people, particularly those involved in saving lives, would stoop to such practices to make a little extra money. If the implicated doctors have used such syringes knowing full well that they are being repacked in an unsterilised state, their actions are unpardonable and deserve the strictest action possible. However, in many situations it would be difficult even for a well-meaning doctor to make out if the syringe is safe or unsafe.

The practice of recycling medical equipment is not new in India. A study in 2003-04, by the IndiaCLEN Programme Evaluation Network (IPEN), revealed that in nearly one-fourth (23.5%) of all injections in India the syringes and/or needles were reused (2). They included both glass and plastic syringes. The rates were similar in all types of health facilities, government or private, including immunisation centres. The reuse rates were significantly higher (35%) in health facilities managed by informally qualified practitioners.

A few decades ago, the practice of reusing disposable syringes (after sterilisation) was widely condoned as resources were scarce and there was little awareness of the risk of transmission of lethal diseases such as HIV/AIDS, Hepatitis B and Hepatitis C. But today, we have enough information about the hazards of recycling medical equipment for such practices to be strictly regulated and accompanied by stringent sterility checks. Moreover, never has any society condoned the use of unsterilised syringes and needles. It is little wonder, then, that the charge against some of the doctors arrested is not "medical negligence" but "culpable homicide".

According to Section 299 of the Indian Penal Code, "whoever causes death by doing an act with the intention of causing death, or with the intention of causing such bodily injury as is likely to cause death, or with the knowledge that he is likely by such act to cause death, commits the offence of culpable homicide." Therefore the charges framed are fully justified when medical professionals, with all their knowledge of transmissible diseases and the need for sterilisation, act in a way that "helps" or "permits" transmission of lethal diseases.

In a crisis situation of this nature, the response of the government cannot end with the arrest of a few people. The response must include bringing about systematic changes in health policy and strengthening monitoring systems to ensure that the policy is implemented.

The health department has undertaken many activities in response to the epidemic, but these appear to be knee-jerk responses with little scientific basis or systematic planning. While they claim to be conducting house-to-house surveys to detect people with signs and symptoms of Hepatitis B, it would have been more effective if they had focused on surveying all healthcare establishments, including clinics, diagnostic laboratories and blood banks, to assess practices related to administering injections and managing hospital waste. One glaring fact that has emerged is that the implicated hospitals and clinics did not follow standard protocols for destroying or deforming syringes after use. There has been no comment by health department officials or

the pollution control board on this aspect.

While health authorities say they are helpless because there is no law under which it is mandatory for Gujarat's 13,000 private medical practitioners to reveal where they bought their equipment, there is a law requiring that healthcare establishments disclose the categories and quantities of hospital waste that they generate and how they handle the waste. The Bio-medical Waste (Management & Handling) Rules, 1998, are applicable to all healthcare establishments that generate biomedical or hospital waste (3). These include hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathology laboratories and blood banks. As per these rules, it is the duty of the people involved to ensure that such waste is handled without any adverse effect on human health and the environment. Rule 5 specifies how the person running the healthcare establishment should handle waste. Schedule 1 (Rule 5) clearly states that used syringes and needles should be disinfected and mutilated before any further handling. Non-compliance attracts provisions of Section 5 and 15 of the Environment (Protection) Act, 1986, which can result in withdrawal of power and water supply, and legal action. Without doubt, ensuring that used equipment is mutilated beyond reuse is an important legal duty of every healthcare establishment.

There are many unscientific medical practices rampant in India today. The study by IPEN quoted above also revealed that about 10% of the population had received some injection or other in a two-week recall period. The indications included both immunisation and curative care. This fact draws attention to the unnecessarily wide use of injections when oral medications could have sufficed. Practitioners are often driven by patients who demand an injection in the misguided belief that it is a quick cure. Practitioners themselves are also known to promote this behaviour as injections bring in more money. Creating awareness in the public about the potential hazards of invasive therapies is an urgent need.

While the best of rules and regulations will not deter a person who is deliberately indulging in unethical and blatantly harmful practices, some additional protections can be offered to the public in the form of vaccination against Hepatitis B. Vaccination has been widely proven to be effective in preventing, or at least reducing, the severity of the infection should it strike. Self-destructing syringes also deserve consideration (4,5). They comprise a plunger which snaps and is broken before the injection has been finished, thus ensuring that the syringe cannot be subsequently reused. However, these are secondary solutions, are often expensive and must not distract from the primary issue of malpractice in this episode.

The Hepatitis B epidemic showed that close intertwining between multiple disciplines is needed to ensure the health of our society. Failures and gaps in multiple systems and processes have allowed such an epidemic to break out. Inadequate monitoring and enforcing of systems for biomedical waste handling is only one of them. Hospital waste pickers and possibly some of the recycling gangs have little knowledge of the health implications of their actions. Education and awareness programmes directed at such populations may make them more aware of the risks they pose to society and to themselves in their handling of infectious hospital waste. The general public is mostly aware that they must insist on the use of disposable or sterilised equipment. However, their awareness must extend to what is done with the waste. They can be the monitors to ensure that syringes are destroyed or deformed in such a way that they cannot be used again. There must be more awareness among hospital personnel as well as the public about the handling of biomedical waste.

References

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