Point of view / Point de vue

Unsafe injections

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In many developing countries use of unsterilized or improperly sterilized needles and syringes is common and causes millions of cases of viral hepatitis B and C as well as contributing to the spread of human immunodeficiency virus (HIV) and other bloodborne pathogens. To combat this problem, WHO has stimulated the development of the "auto-destruct" syringe and encourages all donors, international agencies, and health departments to include a supply of such syringes with all vaccines supplied for emergency purposes. In addition, health providers and the public need to be educated about the risk of inappropriate and unsterile injections.

In developed countries, a single needle-stick incident involving potential transmission of hepatitis B or C virus or human immunodeficiency virus (HIV) to a health care worker is considered a serious problem. However, the message that other people's blood is extremely dangerous is not yet appreciated in many developing countries. Globally, 5–10 $\times$ 10^9 injections are given per year, more than half of which are unsterile in many developing countries. Injections with reused unsterilized or improperly sterilized needles and syringes are estimated to cause millions of cases of viral hepatitis B and C worldwide, and also to contribute to the spread of HIV and other bloodborne pathogens.

The previous article, by Singh et al., demonstrates many of the problems that must be understood in order to address this issue. Transmission by unsafe injection usually goes unnoticed because the initial infection is usually asymptomatic, the diseases have a long incubation period such that association with an injection received months previously is seldom made and difficult to prove, and surveillance of viral hepatitis is often so insensitive that only large outbreaks with many fatalities come to the attention of public health officials. In this outbreak, the concurrent infection with hepatitis D (delta) virus probably increased the mortality rate, allowing it to come to the attention of officials in Delhi. Usually, hepatitis B and C viruses take much longer to kill, with chronic carriers dying of cirrhosis or liver cancer decades after being infected. HIV infection also usually takes more than a decade to kill.

The article also illustrates the problems of (often inappropriate) injections given by unqualified practitioners to patients, all of whom are unaware of the importance of proper sterilization procedures. The belief that injected medicines are "stronger" and that the patient's complaints are not being taken seriously unless an injection is given is deeply entrenched in many cultures. Many practitioners charge more for a medicine administered by injection, and fear that patients will not return unless they receive one, providing economic incentives to continue such practices. We also see in this article reference to the mistaken belief that the use of one syringe with multiple needles is acceptable.

The WHO Expanded Programme on Immunization (EPI) has for many years made safe injections a priority, and with its partner UNICEF has distributed millions of sterilizable needles and syringes and steam sterilizers around the world. It is the reuse of disposable equipment that carries the greatest risk, since the contaminated needles and syringes are still useable, have value, and are not disposed of in many developing countries. EPI has stimulated the development of the "auto-destruct" syringe, which can be used only once, and the goal is to make this the standard injection device in all countries. EPI is calling on all donors, international agencies, and health departments to "bundle" a supply of auto-destruct syringes (and safety boxes to collect them after use) with all vaccines supplied for emergency purposes, and to supply only auto-destruct syringes for injec-

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tions given where sterilizable needles and syringes are not available. This technological fix will solve only part of the problem; education to change attitudes is a vital component of the solution. Health providers and the public must be educated about the risk of inappropriate and unsterile injections so that they know to demand safe injections when they must receive them.

Résumé

Danger des injections

Nombreux sont les pays en développement où l'utilisation de seringues et d'aiguilles mal stérilisées, voire pas stérilisées, est fréquente et est à l'origine de millions de cas d'hépatite virale B et C; elle contribue en outre à la propagation du virus de l'immuno-déficience humaine (VIH) et d'autres germes patho-gènes à transmission sanguine. Pour lutter contre ce danger, l'OMS a encouragé la mise au point de la seringue autobloquante, et invite les donateurs, les organisations internationales et les ministères de la santé à fournir ces seringues avec tout envoi de vaccins destiné à remédier à une situation d'urgence. Il est de plus nécessaire d'éduquer les prestateurs de soins et la population générale concernant les risques dus aux injections non stériles ou inappropriées.