

## EDITORIAL

### SHIGELLOSIS: AN OLD DISEASE WITH NEW FACES

Of all diarrhoeal illnesses afflicting mankind, shigellosis truly is a universal disease, in respect to geographical distribution. Unlike cholera, which is confined almost exclusively to some parts of Asia and Africa, shigellosis has been reported from the hot and humid tropics to arctic climes. Other than monkeys, man is the only definitive host of the diverse *Shigellae* species. With the advent of economic prosperity and consequent improved water supplies and sanitation, shigellosis has ceased to be a threat in industrialized countries. However, even in these countries occasional outbreaks still occur, mostly caused by *Shigella sonnei*. In less developed countries, with unclean water supplies and poor sanitation, the more severe form of shigellosis caused by *Shigella flexneri* frequently is encountered, and often is endemic.

*Shigella dysenteriae* type 1 (Shiga's bacillus) is responsible for the most severe type of epidemic shigellosis. Invariably, it starts with abdominal pain and fever, frequently accompanied by diarrhoea, and soon is followed by passage of mucoid, bloody stool and severe tenesmus. *S. dysenteriae* type 1, isolated in 1898 by K. Shiga, virtually disappeared soon after World War II. In 1969-1971, it made a dramatic comeback, in the form of a pandemic in Central America, which affected six countries, causing thousands of deaths. In the early-mid 1970s, Shiga's bacillus appeared suddenly as the cause of several epidemics in Asia, particularly in Bangladesh, southern India and Sri Lanka. Today, cycles of epidemics due to Shiga's bacillus still are being reported from various parts of the Indian Subcontinent. Similar epidemics have been reported recently from central and eastern Africa, particularly Zaire. In this context, the first two papers in this issue of the JDDR from Ethiopia and Tanzania, take on increased significance.

In-depth investigation of patients with severe shigellosis, particularly children, has highlighted some aspects of the disease which had not been described earlier. For example, the hemolytic-uremic syndrome, probably precipitated by endotoxemia brought about by extensive ulceration of the colon, has been reported in many cases of severe childhood shigellosis. Toxic-megacolon, often leading to painful death, also is seen in a small proportion of children who survive an initial

shigellosis assault. Loss of plasma protein through the gut leading to hypoproteinemia is a common feature of acute shigellosis. Finally, association of malnutrition and shigellosis frequently is seen in developing country pediatric wards caring for malnourished children.

In many developed countries, it is common practice not to use antibiotics for shigellosis patients, due to a concern about increasing antibiotic resistance. Since shigellosis is a self-limiting disease in well-nourished patients, antibiotics may be considered unnecessary. However, in malnourished children who potentially can develop severe complications, an effective antibiotic may be life-saving. These antibiotics reduce the direct loss of plasma protein in the gut, while improving general well-being, including appetite. The choice of antibiotic depends on the prevalent sensitivity pattern in a given community. In recent years, absorbable antimicrobials, such as ampicillin and sulphamethoxazole-trimethoprim, have been the drugs of choice in many countries; while in most of the world tetracycline has become useless.

In developing countries that lack both clean water supplies piped into communities and/or homes and sanitary latrines, and are plagued by flies which are known carriers of the disease, control of shigellosis is a formidable task. On the positive side, however, it has been learned that such simple measures as washing of hands with soap after defecation reduces the diseases' spread. This measure, combined with increased awareness of shigellosis' transmission mode — principally by person-to-person contact — should make it easier to control the spread of shigellosis. Unfortunately, no effective shigellosis vaccine yet is available, though the importance of such a vaccine is widely recognized.

There is little doubt that most of the developing world will lack safe water supplies and sanitation for decades to come. For this reason, shigellosis will continue to be a major health problem. Effective, inexpensive technologies must be developed to reduce the scourge of this disease, in order to improve the nutritional status of millions of children, and to avoid large numbers of mortalities among them.

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