Outbreak of Bartonellosis in Ecuador

On 7 and 11 March 1970 two patients from the Chinchipe Canton were admitted to the Regional Hospital of Loja, Ecuador, with a suspected diagnosis of yellow fever; however, blood examination confirmed that they were two cases of bartonellosis. The first recovered, but the second died 10 hours after admission to hospital.

A total of more than 200 clinical cases were reported in March and April; of these, only five were confirmed by the laboratory. Mortality was low (only three deaths). The cases were treated with chloramphenicol.

From Guayaquil, National Malaria Eradication Program personnel and equipment were flown to the area so that ULV sprayings of fenitrothion to control mosquitoes in the area affected, and DDT intradomiciliary sprayings of houses in the Canton, could be carried out.

The Chinchipe Canton is considered an endemic area of bartonellosis (verruca peruana). It is located in the southern part of the eastern province of Zamora-Chinchipe between the eastern Cordillera of the Andes and the Condor Cordillera, which separates it from the ravine of the Cenepa River toward the east. Its climate is humid tropical, with abundant rainfall during most of the year; the land is very rugged, and ecological conditions are very favorable to the spread of anopheline, *Haemagogus*, *Culex*, and phlebotomus insects.

The Canton has a population of 11,771 inhabitants, distributed in more than 52 localities. The chief town of the Canton is Zumba, which is located at an altitude of 1,200 meters; the other localities are located at altitudes ranging between 800 meters (Isimanchi) and 1,750 meters (San Gabriel). The region is isolated from the rest of the country by a lack of roads, and travelers must use mules or light planes, whose service is very irregular.

By 1966, the presence of *Bartonella* in blood samples and blood cultures of patients coming from the region had been confirmed. Since then no further cases of bartonellosis have been reported, possibly as a collateral result of antimalaria activities.

In October 1978, an epidemic outbreak of verruca peruana was reported in Namballe and San Ignacio, Peruvian communities near the frontier; this led the Peruvian authorities to take urgent control measures, in particular intradomiciliary sprayings of houses in the affected area.

(*Source:* National Malaria Eradication Service, Guayaquil, Ecuador.)

Editorial Comment

Bartonellosis is an endemic disease limited to areas of Colombia, Ecuador, and Peru. It is transmitted through the bite of sandflies of the genus *Phlebotomus*. These vectors only feed by night but are found at altitudes of 750 to 3,000 meters above sea level. The reservoir of the disease is man. The disease, which is produced by *Bartonella bacilliformis* is characterized by an initial febrile period with irregular fever, anemia, pains in the bones and joints and lymphadenopathy. Weeks later an eruptive period occurs, with outbreaks of papules or nodules resembling hemangiomas, sometimes with many small lesions, sometimes with a few tumor-like subepithelial nodules. Fatality of untreated cases ranges from 10 to 40 per cent.

Diagnosis is by demonstration of the infectious agent within red blood cells during the acute phase; in sections of skin lesions during the eruptive stage; or by blood culture during either stage.[1]

As preventive measures it is suggested that known endemic areas be avoided after sundown; otherwise, apply insect repellent to exposed parts of the body.

According to information provided by the Institute of Tropical Medicine of the Cayetano Heredia University of Peru, there has been an increase in cases and outbreaks of bartonellosis in the endemic area of Peru in recent years.

[1] See Hunter, G. W. *et al. Tropical Medicine.* Philadelphia, W. B. Saunders, 1973, and *Control of Communicable Diseases in Man.* 12th edition, Washington, D.C., American Public Health Association, 1975.

Health Examination of Food Handlers

In November 1979, a WHO Working Group met in Copenhagen, Denmark, to discuss the health examination of food handlers. The purpose of the meeting was to clearly establish the various kinds of examination required for the control of foodborne diseases caused by food handlers and to formulate a new strategy for achieving an acceptable level of control of food hygiene.

As a rule, the problem revolves around the validity of

the legal requirements in many countries for food handlers to be medically examined before being employed and at regular intervals thereafter. However: (1) there is little evidence that outbreaks of foodborne diseases are connected with food handlers; (2) medical examinations and laboratory analyses are very expensive and only make it possible to identify a small proportion of the carriers of pathogenic organisms; and (3) from the administrative point of view, it is difficult to ensure comprehensive examination coverage because of the rapid turnover of workers in the food industry.

In most of the European countries a medical examination prior to employment in the food industry is required by law. The requirements for the subsequent regular examinations vary from country to country. Food handlers (excluding housewives) account for 6–10 per cent of the population.

A number of participants in the Working Group expressed doubts about the effectiveness of the national policies of their countries on the medical examination of food handlers. They were of the opinion that insufficient resources were available for examining all the workers and that the cost of these examinations made routinely and on a general basis represented an inefficient use of available resources. Therefore, attention should be concentrated on workers that are most likely to be carriers of pathogenic organisms and on persons that work with foods that are especially sensitive—like those that permit the rapid growth of pathogenic organisms or are for consumption by especially vulnerable groups such as children and the elderly.

While required in many European countries, the medical examination of workers is of limited value in detecting carriers although it reveals some sources of staphylococcal infection (for example, infected skin lesions) and may provide guidance for more elaborate investigations.

It was noted that there is no specific evidence of the value of routine microbiological examinations of the stools of food handlers as a means of identifying healthy carriers of enteropathogenic organisms.

Most of the participants were of the opinion that, although the human carrier could be a source of intestinal pathogens that caused food contamination, other sources such as raw foods and the environment were much more important.

The Group concluded that practice demonstrated that routine examinations of all food handlers should not be a priority; that these examinations should be aimed at specific problems; and that the governments should consider appropriate education of workers and strict supervision and control of food hygiene as a much more effective alternative.

Among the recommendations of the Working Group were the following:

1. Since no medical examination (even if it includes a detailed microbiological examination) can ever be relied on to exclude all carriers of enteropathogens, all food handlers must appreciate their responsibility and continually practice the highest levels of hygiene. To that end, they must be instructed in hygiene practices, and this instruction should be the responsibility not only of the official health authorities but also of their employers.
2. Occupational health nurses and other appropriately trained health personnel have an important role in the food industry, since they can assist in investigating certain conditions such as staphylococcal skin infections; encourage workers to report episodes of illness; and assist in the health and hygiene control of food handlers.
3. *Ad hoc* examination of food handlers, including microbiological examinations, should be performed promptly and thoroughly when epidemiological or clinical evidence indicate a need; for example, when food handlers have been ill or when an outbreak of foodborne disease has occurred in the community.
4. No persons should be allowed to work where they could contaminate food if they have symptoms of gastrointestinal infection or manifest infection of the skin or upper respiratory tract. This is essential even in the absence of positive microbiological findings.
5. Since thorough washing of the hands is very effective in removing enteropathogens, all persons engaged in the preparation of food commercially and in the home should give it particular attention.
6. Research should be carried out into the efficiency and effectiveness of medical examinations of food handlers in the prevention of foodborne diseases.

(*Source: Health Examination of Food Handling Personnel. Report of a Working Group.* World Health Organization, Regional Office for Europe, Copenhagen, 1980.)

Editorial Comment

Many countries of the Region of the Americas are at present reviewing their regulations on the health examination of food handlers, and are evaluating their effectiveness and studying more appropriate methods for the control of food hygiene. The Directing Council of PAHO selected this topic for the Technical Discussions to be held in 1981.