

EDITORIAL

Vibrios in abundance : a growing genus

Pacini could hardly have realised how large and important a group of organisms vibrios would one day be when he first described the typically curved short rod ("comma") bacillus in 1854. Even two decades ago only a few species were recognised in the genus *Vibrio*. Afterwards this genus became a dumping ground for organisms that could not be placed in a suitable existing group. Until recently, the genus *Vibrio* was a poorly characterised heterogeneous group of organisms. Now there are 28 recognised species of which at least 10 are known to be clinically important (1).

Of the vibrios found in man, *Vibrio cholerae* serotype O1 is the most virulent known so far. *V. cholerae* serotype non O1 carries less importance because the number of cases is lower and the illness produced milder than with serotype O1. Though these two serotypes are very close biochemically and some strains produce identical enterotoxin (2, 3) they carry different types of somatic antigen (4). Some workers have speculated that there are environmental factors that change this somatic antigenicity.

One big question is whether the organisms that we identify as "new" have long been present in nature or have only recently appeared as part of the normal evolution process. This is difficult to establish. Genetic engineers can manipulate organisms to produce new strains and similar events may occur spontaneously in nature. New sophisticated methods help differentiate one organism from another and characterise species in detail. Aided by these techniques taxonomists are now working much more effectively on proper classification.

V. fluvialis, *V. mimicus* and *V. hollisae* are three species recently recognised and implicated as causes of diarrhoea in humans. A group of halophilic vibrios, previously referred to as 'Group F' and 'Group EF 6', were isolated from a number of diarrhoeal patients and environmental sources. These organisms were properly placed in the genus *Vibrio* and renamed *V. fluvialis* by Lee *et al.* in 1981 (5). The organism now known as *V. mimicus* was not previously distinguished from

other *V. cholerae*. By virtue of its biochemical and genetic characteristics, *V. mimicus* has now been given the status of a separate species. As a result, its biological activity is now being studied and reported separately by various investigators (3,6,7,8). A group of organisms previously reported as 'EF 13' and 'Enteric Group 42' has now been classified as *V. hollisae* by Hickman *et al.* (9). There are probably many more examples yet to be recognised and added to the genus *Vibrio*.

Vibrios are considered to be autochthonous members of aquatic environments (10) because they have been isolated from places remote from human habitation (11) and from coastal waters (12). The way most of the species seem to disappear and reappear in the environment at certain seasons of the year is characteristic. This is particularly striking in Bangladesh (13) where it has been the subject of a number of ecological studies. Microbial ecologists are continuing their efforts to explore their role and relationships in the environment. In order to understand these and the links between different organisms painstaking investigation is required. These yet unknown facts may eventually help us to achieve our ultimate goal which is disease prevention.

References

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