

AN ANAEROBIC VIBRIO ISOLATED FROM A CASE OF ACUTE BRONCHITIS *

RUTH TUNNICLIFF

(From the Memorial Institute for Infectious Diseases, Chicago.)

An organism resembling the cholera vibrio was found in fair numbers in the sputum of a patient suffering with acute bronchitis.

It is a strict anaerobe. It was isolated in pure culture after three days' incubation at 35 C. from a shining clear colony about 1 mm. in diameter, near the fluid of condensation of a tube of goat blood-agar. In subcultures, after two or three days' incubation, pin-point colonies appear on the surface of blood-agar. The growth is more glistening

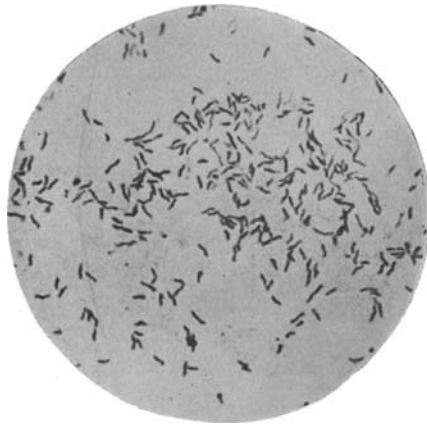


Fig. 1.—Pure culture, 4 days old. Carbol-gentian-violet. $\times 1200$.

on alkaline blood-agar than on plain agar. A profuse growth occurred on the surface and in the fluid of condensation of one tube of Löffler's blood-serum. No change was produced on the surface, but the fluid of condensation became clouded. There was a faint growth in the line of inoculation in a stab of ascites tissue agar and on ascites agar, but none in milk, plain or ascites broth or on plain agar. There was no odor from the cultures. The vibrio was grown with great difficulty, successful cultures being obtained in only a few of the tubes inoculated.

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The vibrios measure from 2 to 4 microns in length and one-fourth micron in width. They show generally one or two curves, but sometimes more. Straight forms are also seen. Chains of two or more vibrios are occasionally observed. The ends are generally pointed and not parallel to the long axis. A ring may be seen at times, attached to one end. Rather long thick filaments are sometimes observed. When stained by the Zettnow method, the vibrio shows one long fine wavy flagellum attached to its extremity.

The vibrio is gram-negative. It stains fairly deeply with methylene-blue, but not so intensely as with carbol-gentian violet or carbol-fuchsin. It is colored blue with Giemsa's stain. Irregular staining is frequently observed.

With dark-field illumination the vibrio is seen to be flexible and commonly very motile, not progressively, but moving around its own axis, often appearing to have a corkscrew motion. The vibrio died before its pathogenicity was tested.

This vibrio differs from *Spirillum sputigenum* isolated by Mühlens,¹ in the number and arrangement of the flagella and the staining reaction with Giemsa, *S. sputigenum* generally possessing two or three flagella, one usually attached to its concave side and staining red with Giemsa. It differs from *Spirillum crassum* and *Vibrio tenuis* of Veillon and Repac² culturally, and in not producing any odor.

1. *Centralbl. f. Bact.*, I, Orig., 1909, 48, p. 523.

2. *Ann. Past. Inst.*, 1912, 25, p. 300.