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ISOLATION OF *BORDETELLA PERTUSSIS* FROM A PUBLIC TELEPHONE

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THE isolation of *Bordetella pertussis* has been attempted by many workers^{1,2}. In a study of 62 clinically-diagnosed cases of whooping cough in Bombay³, not even a single strain of *B. pertussis* could be isolated. Similarly 52 children (aged between 1.5 months to 11 years) clinically suspected to suffer from whooping cough, were studied in Chandigarh⁴. The organism could be isolated in only four cases. The present study concerns the extra-human isolation and identification of a *B. pertussis* strain to understand the microbiological pattern of pertussis infection.

A specimen was collected from a telephone available for general use by public, at the Head Post-Office of Jabalpur City. Sampling was done by swabbing the telephone mouthpiece with sterile swab moistened with casein-hydrolysate basal medium⁵ and stabbing into a tube of transport medium (Oxoid charcoal agar with 0.25 unit of benzyl penicillin/ml). Within two hours the swab was streaked gently on plates of Oxoid charcoal agar cm 119 (with 10% horse blood, 0.25 unit of benzyl penicillin/ml and 2 µg/ml of M & B 938) and Oxoid Bordet-Gengou medium cm 267. Growth appeared after three days of aerobic incubation at 35° C. Colonies were smooth and raised with glistening appearance and pearl-like lustre. Further incubation gave them a greyish white colour. A mucoid substance was produced by the culture and the growth was sticky and tenacious.

Microscopic examination of the culture revealed that it is a small coccobacillus (1-1.4 µ long and 0.2-0.5 broad). The organism was gram-negative,

non-motile and non-sporing. The bacterium was not able to utilize the citrate as the sole source of carbon and could not be grown on plates of 5% sheep blood agar and peptone agar medium. Acid production and oxidative nature of organism were determined by oxidation-fermentation medium⁶. The organism was identified by slide agglutination test with standard sera of Burroughs-Wellcome, England. The isolated strain belongs to sero-type 1,3.

Fresh encapsulated culture showed pathogenic potentiality in mice when inoculated intranasally as well as by intraperitoneal route. Prolonged laboratory passage led to pleomorphism and the capsule and virulence were lost.

B. pertussis is a common cause of whooping cough in children upto the age of 10 years⁷. Since children of this age group are not generally users of a public telephone, no link could be established between infectant transmission and contaminated telephone. However, epidemiological importance of this report cannot be ignored as preponderance of 1,3 type strain is worldwide⁸. To our knowledge, this is the first isolation of *B. pertussis* reported from a non-clinical specimen. The technique described may allow the detection and isolation of *B. pertussis* from a wide range of inhabitants where it is present and at the same time facilitates the understanding of the ecology of the bacterium.

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