
To the Editor,

Haemophilus influenzae is a strictly human parasite responsible for a wide variety of respiratory and invasive infections. Six different serotypes (a through f) have been identified, as well as nontypable strains that lack a capsule and, hence, the serotyping antigen. Previously, most invasive H influenzae diseases were due to serotype b strains; since the introduction of the conjugate H influenzae type b vaccines, the epidemiology of invasive H influenzae disease has changed tremendously, with most diseases now caused by either non-type b strains or nontypeable strains (1). Haemophilus parainfluenzae, on the other hand, is not usually regarded as a common pathogen, but has been known to cause infections such as pneumonia, peritonitis, biliary tract infection, endocarditis, urinary tract infection and exacerbation of chronic obstructive pulmonary disease (2).

Biotyping has been used for more than 30 years to characterize isolates of H influenzae and H parainfluenzae. Biotypes are assigned based on the biochemical reactions for indole, urease and ornithine decarboxylase production. Eight biotypes exist for each species, designated biotype I through biotype VIII (3-6). Despite having limited discriminatory power, when used in conjunction with other methods including newer genetic tools, biotyping may be helpful in the clinical laboratory to identify Haemophilus aegyptius (biotype III), which causes bacterial conjunctivitis (7), and Haemophilus quintini (biotype IV), which causes urogenital and neonatal infections (8).

Guidelines for biotype assignments can be found in several peer-reviewed publications and text books including Topley and Wilson’s Microbiology and Microbial Infections and the Manual of Clinical Microbiology (3-6,9-13). However, in the 10th edition of the Manual of Clinical Microbiology (13), the table showing biochemical reactions of H influenzae and H parainfluenzae biotypes contains a significant error that may lead to misidentification of biotypes. The error appears to involve the urease and ornithine decarboxylase reactions. Either the table subheadings or the results of the urease and ornithine decarboxylase reactions in the table content have been switched, leading to misidentification of biotypes. The error requires the use of the new identification table in the Manual of Clinical Microbiology, with the proposal of a new species. J Gen Microbiol 1976;93:9-62 (reference 3); †Ledeboer NA, Doern GV. Haemophilus. In: Manual of Clinical Microbiology, 10th edn. Washington, DC: ASM Press, 2011:588-602 (reference 13). – Negative; * Positive

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REFERENCES

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