Pitting of Agar Surface by Pseudomonas stutzeri

JANE J. ALEXANDER AND JAY F. LEWIS*

Department of Pathology, The Baroness Erlanger Hospital, Chattanooga, Tennessee 37403

Received for publication 23 September 1975

A strain of *Pseudomonas stutzeri* which exhibited pitting of agar surfaces is described.

The literature describes the colonial morphology of *Eikenella corrodens* to include pitting of the surface of blood agar, but there has been no documentation of such a phenomenon demonstrated by the organism, *Pseudomonas stutzeri* (2, 3).

We recently isolated P. stutzeri exhibiting pitting of blood agar similar to that seen in the growth of E. corrodens. Over 105 colony-forming units/ml of a large gram-negative rod was isolated from the urine of a 60-year-old female with history of carcinoma of the vulva. This woman had an in-dwelling bladder catheter for a period of time. The organism initially grew only on the blood agar plate used for primary isolation. It did grow on Tergitol 7 and Mac-Conkey agar after subculturing. Because of the marked pitting noted initially, it was felt that this might represent an E. corrodens, although this would be an unusual site for an infection due to this organism. However, initial characterization revealed the organism to be catalase positive, oxidase positive, and motile by hanging drop, which indicated that this was not an E. corrodens. This strain of P. stutzeri exhibited both rough and smooth colonies. The subcultures from the rough colonies exhibited pitting, whereas subcultures from the smooth colonies did not exhibit the pitting phenomenon. This isolate of *P. stutzeri* (1) was characterized as follows: triple sugar iron agar, alkaline/alkaline; catalase, positive; oxidase, positive; growth on MacConkey agar, positive; nitrate reduction, positive with gas production; motile on hanging drop slide; one polar flagellum; carbohydrates (Difco OF media)—glucose, positive; xylose, positive; lactose, negative; maltose, positive; indophenol oxidase, positive; L-arginine dihydrolase, negative; L-lysine decarboxylase, negative; L-ornithine decarboxylase, negative.

Certain of the biochemical and the flagella stains were done by the Tennessee Department of Public Health. Pam Wintom assisted in preparation of the manuscript.

LITERATURE CITED

- Hugh, R. and G. L. Gilardi. 1974. Pseudomonas, p. 259. In E. H. Lennette, E. H. Spaulding, and J. P. Truant (ed.). Manual of clinical microbiology, 2nd ed. American Society for Microbiology, Washington, D.C.
- Lennette, E. H., E. H. Spaulding, and J. P. Truant (ed.). 1974. Manual of clinical microbiology, 2nd ed. American Society for Microbiology, Washington, D.C.
- Weaver, R. E., H. W. Tatum, and D. G. Hallis. The identification of unusual pathogenic gram negative bacteria (Elizabeth O. King). Center for Disease Control, Atlanta, Ga.