JOURNAL OF BACTERIOLOGY, Mar. 1968, p. 1175

Vol. 95, No. 3
Printed in U.S.A.

Cardiobacterium hominis in Genitourinary Specimens

I. J. SLOTNICK

Division of Laboratories, Cedars-Sinai Medical Center, Los Angeles, California 90029

Received for publication 13 January 1968

Infections with *Cardiobacterium hominis*, formerly designated as "Group IID," have been primarily associated with human endocarditis (I. J. Slotnick and M. Dougherty, Antonie van Leeuwenhoek J. Microbiol. Serol. **30**:261, 1964) and, interestingly, a strain has been recently isolated from human spinal fluid (R. Wood, *personal communication*). In contrast to the limited number of known clinical cases of disease attributable to *C. hominis*, these organisms can be found as part of the flora of the upper respiratory tract in a majority of individuals (I. J. Slotnick, J. Mertz, and M. Doughtery, J. Infect. Diseases **114**:503, 1964). None of the persons examined in the group harboring organisms in the nose or throat presented any evidence of past or current history of rheumatic heart disease, endocarditis, or related heart disorders. Fluorescent antibody smear analysis has implicated these organisms as possible residents of the intestinal tract, but cultural isolation from stool was unsuccessful. The present study was undertaken to extend our knowledge of the human occurrence of this opportunistic pathogen, and in it we report a cultural and fluorescent antibody survey of the presence of *C. hominis* in genitourinary specimens from adult gravid and nongravid patients.

Cervical and vaginal swabs for cultural analysis were placed in sterile tubes containing 2 ml of Trypticase Soy Broth (BBL) and plated as soon as possible after procurement on a Casman's Blood Agar plate and a Chocolate Agar plate (BBL). These were incubated in CO_2 jars at 37 C for a minimum of 4 days. Filter papers wet with sufficient water to provide atmospheres of high humidity were routinely placed at the bottom of the jars. Smears for fluorescent antibody analysis were prepared directly from additional swab samples taken at the same time as those for culture.

Urine was obtained preferably by sterile catheterization. Clean mid-stream urine was collected whenever catheterization seemed inappropriate. Specimens were cultured immediately or, if delay occurred between receipt of urine and culture, urine was stored at 5 C for a maximum of 24 hr. Culture media and incubators were the same as described above for cervical and vaginal specimens. Smears for fluorescent antibody study were prepared from the sediment of 10-ml portions of centrifuged urine.

The methods for the preparation of hyperimmune antisera, labeling with fluorescein isothiocyanate, and the staining of test slides were identical with previously described techniques (I. J. Slotnick and M. Dougherty, J. Infect. Diseases **114**:503, 1964).

C. hominis was isolated from cervical and vaginal cultures of 2 patients among 159 studied. In both of these instances, Doederleins bacillus was the predominant organism and *C. hominis* grew in moderate numbers. Other organisms were not present in these cultures. In weekly follow-up cultures of these positive individuals for a period of 6 weeks, *C. hominis* was cultured only once from each of the females. Fluorescent antibody smears were positive in each instance that culture revealed the presence of the organisms and also in six additional patients in whom cultures were negative. None of the culture- or smear-positive patients exhibited any overt disease symptoms. Urine smears and cultures were uniformly negative.

The extremely low incidence of *C. hominis* in cervical and vaginal cultures, and its complete absence in the urine of the group investigated, necessitates the viewpoint that these organisms are only transient contaminants and do not compose a part of the indigenous flora of the genitourinary tract. This may well be explained on the basis that the female genital tract offers a very unfavorable environment for the survival of this group of organisms known to be extremely sensitive to chemical antibiosis.

This investigation was supported by Public Health Service research grant AI-07535-02 from the National Institute of Allergy and Infectious Diseases.