FIRST ISOLATION OF CORYNEBACTERIUM SUIS IN MEXICO AND THE UNITED STATES

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Corynebacterium suis was first isolated by Soltys and Spratling in 1967 in the United Kingdom from the urinary tract of sows affected with cystitis and pyelonephritis. Since that time C.suis cystitis and pyelonephritis have been reported from Holland, Switzerland, Denmark, Norway, Finland, Canada, Australia and Hong Kong. The main habitat of C. suis is the preputial diverticulum of the boar, although it has occasionally been isolated from the vaginal vestibule of sows.

There have been no reports of the isolation of C. suis from Mexico or the U.S.A., therefore, it was considered worthwhile establishing whether C. suis was present in the pig population in these countries.

As the preputial diverticulum is the commonest known habitat of C. suis, only this site was examined.

MATERIALS AND METHODS

Mexico: Boars were sampled from two farms, one (A) in the state of Tlaxcala and the other (B) in the state of Mexico. Farm A: thirty-seven boars age 1-4 years were sampled; most of them were homebred but some had been purchased from neighboring regions Farm B: replacement boars at this farm were usually obtained from the U.S.A. Thirty-one such boars, aged 10-12 months were sampled. In addition, Twenty-four homebred boars aged 2-4 years were examined.

U.S.A.: Pigs from an abattoir and from one farm (C) in the state of Minnesota were investigated. Abattoir: Ninety-eight adult boars were sampled immediately after electrical stoning and bleeding. Farm C: Thirty-eight boars aged 1-4 years were sampled.

Samples were obtained from the preputial diverticulum with a sterile cotton swab. Each sample was inoculated unto CNAM medium (Dagnall and Jones, 1982) and incubated anaerobically at 37°C for five days. Colonies considered to be those of C. suis were subcultured onto 7% horse blood agar. After three days' incubation the cultures were checked for purity and eighteen isolates were randomly selected from each country and transported to the United Kingdom for detailed examination and comparison with British strains.

RESULTS AND COMMENTS

Mexico: In farm A, C suis was isolated from thirty (81%) of thirty-seven boars and from forty-eight (87%) of fifty-five boars on farm B.

U.S.A.: C. suis was isolated from thirty-two (32.6%) of ninety-eight boars at the abattoir, and from twenty-three (60.0%) of thirty-eight boars on farm C. The comparatively low isolation rate from pigs in the U.S.A. is, to some extent, due to the insatisfactory samples in that swabs were not saturated with the fluid usually present in the diverticulum. It is our experience that dry swabs frequently fail to yield C. suis.

The C. suis strains from Mexico and the U.S.A. were identical in their main laboratory characteristics, but differ from British strains in that they ferment sucrose and trehalose. Although C. suis cystitis - pyelonephritis has not been reported from Mexico or the U.S. it is clear that the organism occurs in pigs in both countries.

Cystitis and pyelonephritis are known to be a problem in sow herds in Mexico (Ramirez, personal communication) and was reported in Canada in 1966.

REFERENCES

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RESUMEN

Se logro el aislamiento de C.suis a partir del saco prepucial de verracos en Mexico (81 y 87%) y E.U.A. (32.6 y 60%). Este constituye el primer reporte sobre la presencia de dicho agente en estos paises. El microrganismo puede causar cistitis y pielonetritis, y es una importante causa de deshecho de cerdas