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First Isolation of *Peptococcus indolicus* from a Human Clinical Specimen

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Peptococcus indolicus was isolated from a skin lesion of a sheepherder. A case report is given, and microbiological features of this organism are described.

Peptococcus indolicus was first described by Christiansen in 1934 under the name *Micrococcus indolicus* (1). Antigenically and biochemically, *P. indolicus* has been found to be a well-defined species (5). It has previously only been isolated from veterinary sources including summer mastitis of cattle, various suppurative conditions in swine, and the nasal cavity, tonsils, vagina, and interdigital skin of clinically healthy cows (6). We here report the first isolation of *P. indolicus* from a human source.

Case report. A 56-year-old woman presented to her physician with a lesion on her right index finger. One week previously, she had sustained an abrasion of this finger while bottle-feeding lambs. These lambs, which frequently bit the patient's hand, had sores around their lips and in their mouths. The initial lesion progressed from a red papule to a frank pustule with no associated constitutional symptoms. On physical examination, there was a large tender pustule roofed with a thick yellowish crust over the dorsal aspect of the proximal interphalangeal joint of the right index finger. Signs of lymphangitis and epitrochlear and axillary lymphadenitis were present. The rest of the examination was normal.

The patient was hospitalized, and complete blood count, differential count, and hand X-ray were normal. Blood cultures were sterile. The lesion was surgically unroofed, drained, and debrided, and aerobic and anaerobic bacterial cultures were obtained. Because of the lymphangitis and lymphadenitis, therapy was initiated with intravenous penicillin for 2 days, followed by intravenous cephalothin for an additional 3 days. The inflammatory signs soon regressed, and the patient was dismissed on hospital day 5 to continue local wound care at home. Oral penicillin was prescribed to complete a 2-week course of therapy, during which the lesion healed well with minimal scar formation.

The cultures of the skin lesion grew group D streptococcus, *Bacillus* species, *P. indolicus*, *Peptococcus* species, *Fusobacterium nucleatum*, and *Candida parapsilosis*. The identification of *P. indolicus* was confirmed by L. V. Holdeman (Anaerobe Laboratory, Virginia Polytechnic Institute and State University, Blacksburg). The results (minimal inhibitory concentrations) of antimicrobial susceptibility tests of *P. indolicus*, determined by a broth microdilution method (4), were as follows: penicillin, $\leq$0.78 μg/ml; cephalothin, 1.56 μg/ml; clindamycin, $\leq$0.78 μg/ml; tetracycline, $\leq$0.78 μg/ml; and metronidazole, $\leq$0.78 μg/ml.

P. indolicus is a gram-positive anaerobic coccus whose microbiological characteristics have been described by Sorensen (5) and Holdeman and Moore (2). Colonies on blood agar plates are usually nonhemolytic, 0.3 mm in diameter, slightly buff, smooth, circular, peaked, and entire. An important feature is the production of indole; the organism also produces hydrogen sulfide and coagulase and reduces nitrate. It fails to attack carbohydrates, and other negative reactions include gelatin liquefaction, urease, lecithinase, lipase, catalase, and motility. Gas chromatographic analysis detects acetic, propionic, and butyric acids as the major end products of glucose fermentation. Lactate is converted to propionic acid. Our isolate demonstrated all of these characteristics except that we did not test for hydrogen sulfide production.

The clinical significance of the isolation of *P. indolicus* in our patient is uncertain. The history of having been in contact with lambs harboring sores in their mouths suggest orf as the primary infection. Orf infection in humans is classified as a zoonosis, since it is directly or indirectly (contaminated objects) transmitted to humans from sheep (3). The etiological agent is a member of the poxvirus group. Generally, the disease occurs in sheepherders and consists of a solitary lesion confined to the hand, which advances through a vesiculopapular stage to a regressing stage, healing in 1 month with slight scar formation. Occasionally, lymphangitis, lymphadenitis, and secondary bacterial complications ensue.

We postulate that the initial lesion in our

patient was orf with secondary infection from a mixture of bacteria possibly representative of the lamb's mouth flora. However, we are not able to corroborate this hypothesis with any documentation that *P. indolicus* has been found as part of the normal mouth flora of sheep. On the other hand, isolation of this well-characterized organism from a surgical culture in this type of infection suggests that *P. indolicus* may be transmitted to humans from a variety of farm animals and may have the potential to participate in human infection.

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