CLINICAL PRACTICE

Clinical Images

Infectious Pneumorachis Due to *Clostridium septicum*

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CASE DESCRIPTION

A 64-year-old man with schizophrenia presented with 2 days of fever and buttock pain. Examination revealed a temperature of 37.8 °C and buttock erythema without an open wound. Computed tomography demonstrated soft tissue gas throughout the left lower extremity and buttock (Fig. 1a), extending into the left neural foramen (i.e., the exit space for nerve roots of the spinal canal, Fig. 1b). The patient's condition deteriorated rapidly and he was transitioned to comfort care, as surgical intervention was deemed futile.

Blood cultures grew *Clostridium septicum*. The cause of death was compatible with clostridial myonecrosis (gas gangrene), a severe soft tissue infection with a 70–100% mortality¹. Pneumorachis (air in the spinal canal), although usually from trauma², rarely complicates soft tissue infections, and portends a very poor prognosis. Unlike other *Clostridium* species, *Clostridium septicum* can enter soft tissues without antecedent trauma, and spread hematogenously from the gastrointestinal tract. Risk factors associated with spontaneous clostridial infection include colonic malignancy, inflammatory bowel disease, hematologic malignancies, neutropenia, and AIDS. Non-gastrointestinal related transmission is also reported in recipients of musculoskeletal-tissue allografts. Acute onset of severe muscle pain with rapidly progressing sepsis should prompt clinicians to entertain the possibility of spontaneous clostridial infection.

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Fig. 1 a Extensive soft tissue gas in left lower extremity and buttock. **b** Gas in neural foramen.

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