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Case Illustrated

Tetanus after blunt lawn mower trauma



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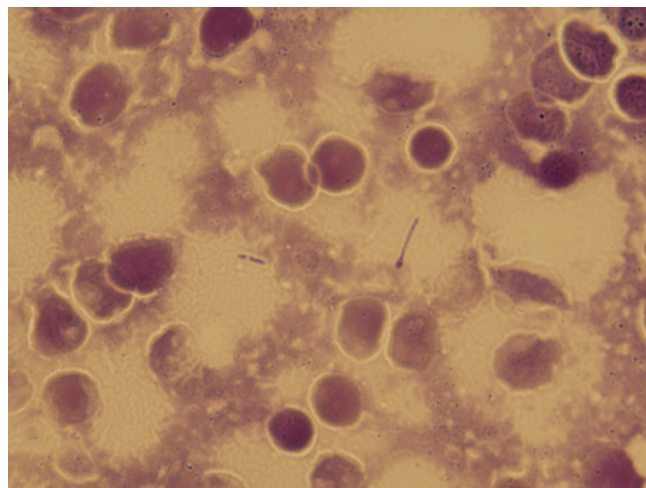
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ABSTRACT

A patient presented with tetanus ten days after blunt trauma with a lawn mower. Our case describes the diagnosis and treatment of this patient with an infectious disease commonly seen in the developing world but rarely seen in the developed world.

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An 85-year-old man was referred by his general practitioner because he was unable to open his mouth fully. Past medical history included warfarin-treated atrial fibrillation and chronic kidney disease. Ten days prior to admission he had fallen and injured his thigh with a lawn mower.

On admission he was afebrile with BP 130/60 and pulse 100/min. He had reduced jaw opening and extended neck. On his right thigh, he had a large bluish discolored tender lesion measuring

10 cm × 15 cm. The rest of the clinical examination was normal, except for a systolic murmur. His blood results were hemoglobin 8.5 g/dL, leukocytes $8.6 \times 10^9/L$, neutrophils $6.7 \times 10^9/L$, INR 3.3, creatinine 232 $\mu\text{mol/L}$, urea 18.4 mmol/L, albumin 28.6 g/L and CRP 167 mg/L.

A clinical diagnosis of tetanus was made and he was treated with tetanus immunoglobulins, intravenous piperacillin-tazobactam and metronidazole. His anticoagulation was reversed, and under spinal anesthesia the wound was opened, drained and debrided.

Postoperatively the patient had a respiratory arrest but recovered with bag ventilation. He required non-invasive ventilation and was given diazepam to treat increasing muscle spasms. Unfortunately he had a cardiac arrest and died the next day.

Microscopy of gram staining of the wound fluid revealed gram-positive rods with terminal spores resembling matchsticks (1000×) and culture grew *Clostridium tetani*. Environmental spores were likely introduced into microscopic skin trauma at the time of injury.

Only one member of the medical team at this Norwegian university hospital had seen a case of tetanus before. The immunization status of the patient was unknown. However he had not received any tetanus boosters in adulthood and because of his advanced age it was unlikely that he had previously been vaccinated.

Tetanus is a common and potentially lethal condition in the developing world but is rare in the developed world. This case illustrates the importance of considering a tetanus diagnosis and vaccinating against it, also in the developed world, especially in subpopulations more vulnerable to the disease: the immunosuppressed, the elderly and those not included in the regular immunization programs, such as immigrants.

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