Clostridial Myonecrosis

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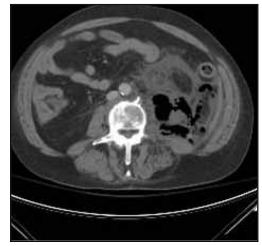
A 48 year-old male with a past medical history of gout, degenerative disc disease, and T cell lymphoma treated with chemotherapy and autologous peripheral blood stem cell transplant, currently in remission, presented seven days status-post a non-myeloablative allogeneic transplant with an acute onset of excruciating left hip and groin pain and a low-grade fever. The physical exam did not reveal any obvious cause of his extreme pain.

The CT imaging revealed extensive inflammation of the left retroperitoneum and psoas muscle with a large focus of gas. The patient was taken emergently for exploratory surgery that revealed extensive myonecrosis of the left psoas muscle with air and foul-smelling serous fluid. The pathology of the surgical soft tissue specimen revealed *Clostridium perfringens.*

Clostridial myonecrosis, also known as gas gangrene, is a severe, rapidly progressive infection with devastating results. It is usually the result of trauma or surgical complication, but a small percentage of cases are spontaneous. The spontaneous cases are often associated with either a gastrointestinal malignancy, or in the case of our patient, a hematological malignancy. Clinical findings include severe pain out-of-proportion to physical exam findings, low-grade fevers (less than 101F), and tachycardia. The overlying skin may vary in color - it may be completely unchanged, very pale, bronze in color, or even a purplish-red color. These color changes may also be associated with bullae. Gas may be palpated in the tissues.



Complications of this infection include a brisk hemolysis, jaundice, liver necrosis, shock, renal failure, ARDS and death. The mortality is 20-30% if the infection occurs in an extremity and is treated rapidly and aggressively. However, truncal or spontaneous cases are often associated with a mortality of 67-100%, even with proper treatment. Treatment is multifactorial and includes appropriate antibiotics, usually penicillin and/or clindamycin. Aggressive surgical debridement is essential. Hyperbaric oxygen therapy may also be effective as an adjunct to antibiotics and surgery; however, studies have failed to show a consistent benefit.

Mortality usually occurs within 24-36 hours of infection, and even when the patient survives, severe disability usually results from the numerous and radical surgeries required to debride infected tissue.

References

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