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Staphylococcus Aureus Septic Arthritis and Necrotizing Fasciitis in a Patient With Undiagnosed Diabetes Mellitus.

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Abstract : Background: Septic arthritis is a diagnosis that must be considered in any patient presenting with acute joint swelling and fever. Among the several risk factors for septic arthritis, such as age, rheumatoid arthritis, recent surgery, or skin infection, diabetes mellitus can sometimes be the main risk factor. Staphylococcus aureus is the most common pathogen isolated in septic arthritis; however, it is uncommon in monomicrobial necrotizing fasciitis. Objectives: A case report of concomitant septic arthritis and necrotizing fasciitis in a patient with undiagnosed diabetes based on clinical history. Study Design & Methods: We report a case of a 58-year-old Portuguese previously healthy man who presented to the emergency department with fever and left knee swelling and pain for two days. The blood work revealed ketonemia of 6.7 mmol/L and glycemia of 496 mg/dL. The vital signs were significant for a temperature of 38.5 ºC and 123 bpm of heart rate. The left knee had edema and inflammatory signs. Computed tomography of the left knee showed diffuse edema of the subcutaneous cellular tissue and soft tissue air bubbles. A diagnosis of septic arthritis and necrotising fasciitis was made. He was taken to the operating room for surgical debridement. The samples collected intraoperatively were sent for microbiological analysis, revealing infection by multi-sensitive Staphylococcus aureus. Given this result, the empiric flucloxacillin (500 mg IV) and clindamycin (1000 mg IV) were maintained for 3 weeks. On the seventh day of hospitalization, there was a significant improvement in subcutaneous and musculoskeletal tissues. After two weeks of hospitalization, there was no purulent content and partial closure of the wounds was possible. After 3 weeks, he was switched to oral antibiotics (flucloxacillin 500 mg). A week later, a urinary infection by Pseudomonas aeruginosa was diagnosed and ciprofloxacin 500 mg was administered for 7 days without complications. After 30 days of hospital admission, the patient was discharged home and recovered. Results: The final diagnosis of concomitant septic arthritis and necrotizing fasciitis was made based on the imaging findings, surgical exploration and microbiological tests results. Conclusions: Early antibiotic administration and surgical debridement are key in the management of septic arthritis and necrotizing fasciitis. Furthermore, risk factors control (euglycemic blood glucose levels) must always be taken into account given the crucial role in the patient's recovery.

Keywords : septic arthritis, Necrotizing fasciitis, diabetes, Staphylococcus Aureus
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