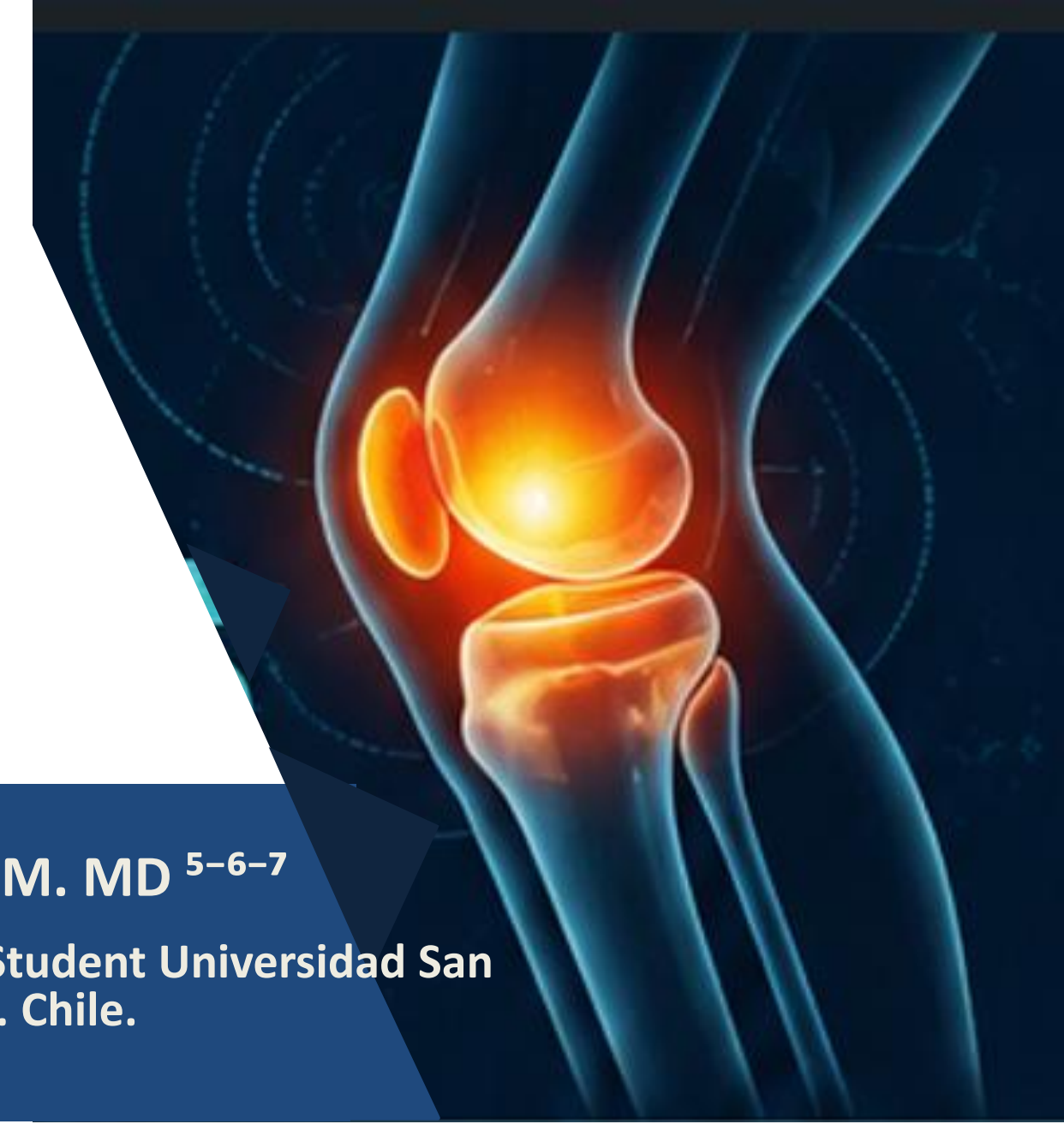


TWO CASES OF SUBACUTE OSTEOMYELITIS ROBERTS TYPE V REPORT AND LITERATURE ANALYSIS



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INTRODUCTION

Although osteomyelitis is uncommon in children, early diagnosis is essential to prevent acute complications and long-term morbidity (Arnold, 2015). Subacute osteomyelitis (SAO) represents a rare and diagnostically challenging entity. Epiphyseal involvement, as described in Roberts type V (Roberts, 1982), is exceptionally uncommon (Ezra, 2002).

AIM

To report two cases of type V subacute osteomyelitis of the femoral condyle, one treated conservatively and the other surgically due to joint involvement, along with early follow-up and a review of the literature.

MATERIAL

Case report developed in accordance with CARE guidelines.

CASES REPORT

Case 1: A 4-year-old child presented with a 3-week history of right knee pain associated with intermittent erythema, local warmth, and fever. Inflammatory markers were low, and imaging demonstrated subacute osteomyelitis with joint involvement secondary to cortical rupture of the lateral femoral condyle. Surgical debridement and curettage were performed, followed by 7 days of intravenous antibiotics and oral therapy to complete a total of 3 weeks, along with offloading. At 3-month follow-up, the patient showed cortical consolidation and full range of motion.

Case 2: A 6-year-old child presented with a 1-day history of left knee pain without fever. Initial radiographs were normal, but inflammatory markers were elevated. Contrast-enhanced MRI confirmed subacute osteomyelitis of the lateral femoral condyle. The patient received 6 days of intravenous antibiotics followed by oral therapy to complete 3 weeks, achieving full recovery and normal gait at 1-month follow-up.

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CLINICAL CASES AND DISCUSSION

Epiphyseal SAO has a mean age at presentation of 46 months (range: 10 months–14 years). Clinically, 79% of patients are afebrile; however, fever is associated with an 80% rate of positive cultures.

The distal femur is the most commonly affected anatomical site, followed by the proximal tibia.

Infection may occur via hematogenous spread, transphyseal extension from the metaphysis, or less commonly through direct inoculation.

Two microbiological patterns have been described: an infant form (<4 years), most commonly caused by *Kingella kingae*, and a juvenile form (>4 years), predominantly due to methicillin-sensitive *Staphylococcus aureus* (MSSA).

Recommended management includes surgical curettage, biopsy, and culture for aggressive or lytic lesions or for cases unresponsive to antibiotic therapy. In non-aggressive lesions, conservative management with antibiotics is advised: first-generation cephalosporins for the infant form and cloxacillin for the juvenile form.

CONCLUSION

Favorable outcomes have been reported when treatment aligns with the current literature, supporting conservative management in the absence of aggressive radiological features and surgical intervention when lytic lesions or joint involvement are present.

TAKE-WORK MESSAGES

- Roberts type V SAO is rare but should be considered in children with subacute knee pain.
- Clinical, laboratory and imaging findings should guide the need for surgical intervention.
- Treatment according to literature recommendations leads to excellent outcomes.

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