Title
Septic arthritis secondary to PVL toxin producing staphylococcus aureus

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Introduction
Panton-Valentine Leukocidin (PVL) toxin producing strains of staphylococcus aureus are known to cause severe skin and soft tissue infections. We present a case report of a patient who suffered from septic arthritis and overwhelming sepsis from proven PVL toxin secreting staphylococcus aureus.

Case Study
A 13 year old boy presented to the Emergency Department with a one day history of right sided hip pain and an inability to weight bear, one week after incision and drainage of a left sided buttock abscess. He was systemically unwell with raised inflammatory markers and continued to deteriorate despite Co-Amoxiclav and washout of the hip. Post-operatively, ongoing pain led to an MRI that showed worsening right hip septic arthritis with extensive inflammatory changes. A change of antibiotics to Rifampicin and Trimethoprim following PVL isolation and second washout led to improvement.

Discussion
The literature supports that beta-lactam antibiotics increase the expression of staphylococcus aureus PVL toxin by activating its transcription leading to a greater systemic inflammatory response. Patients usually present with minor skin infections however rarely, invasive infections can occur including septic arthritis. An MDT effort to achieve early surgical management with tailored antibiotics can improve outcome as the use of penicillin can be detrimental.

Recent publications:

First author publication: PATEL A, SHEPHERD K, KARTHIK K
Patient positioning for tension band wiring of olecranon fractures, The Annals of The Royal College of Surgeons of England, PMID 30112935

First author publication: PATEL A, KARTHIK K
Management of Atypical Bilateral Complex Shoulder Fracture Dislocation and Review of the Literature.
Manuscript submitted to Strategies in Trauma and Limb Reconstruction

Abstract international journal publication: PATEL A, PICKERING
Azygos system of veins in relation to Posterior Thoracic Surgery. The Journal of Anatomy (in press)

Abstract international journal publication: PATEL A, FRAIN C, NEFF K, CARSWELL K, PATEL AG
Perioperative management of Type II Diabetes Mellitus around Bariatric Surgery. Obesity Surgery

Abstract international journal publication: HURLOW A, LAUD R, PATEL A
Transfer of care from hospital to home in the last days of life: is it safe and effective? BMJ Supportive & Palliative Care.

Research project author: PATEL A, PICKERING J
Azygos System of Veins in relation to Posterior Thoracic Surgery.

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