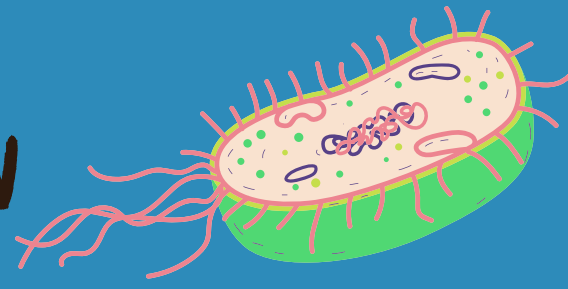


TB or NOT TB? THAT IS THE QUESTION



PROPOSING A MODIFIED KOCHER CRITERIA FOR THE SOUTH AFRICAN CONTEXT

In Southern Africa, distinguishing septic arthritis in paediatric patients from non-infectious aetiologies of joint effusions is complicated by the high burden of Tuberculosis (TB) and HIV, which can lead to non-classical presentations of septic arthritis.



The Kocher Criteria is widely used to differentiate between septic arthritis and non-infectious arthropathies. It is unknown if these criteria are useful in an urban setting in Southern Africa.

Study Design

A retrospective review from 2013 to 2015 of patients <12 presenting to Red Cross with swollen, painful joints



Demographic: low SES, from densely-populated areas -> increased risk of TB exposure



Exclusion Criteria:

- Children older than 13
- Without tissue culture or analysis at Red Cross



Tests on samples include histology, microbiology, culture and PCR Xpert



Aetiology classified as:

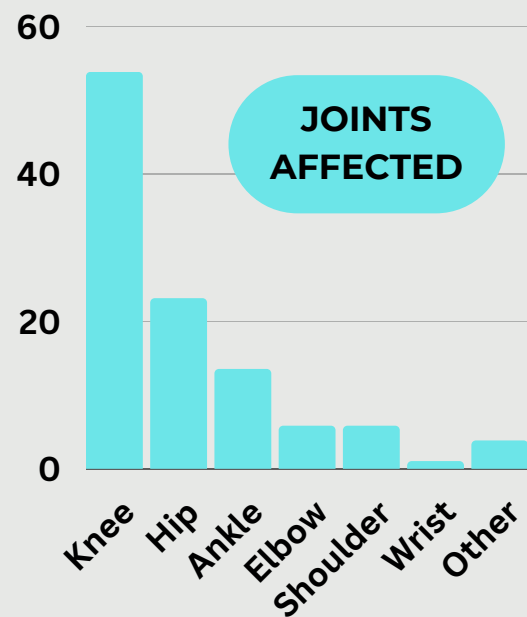
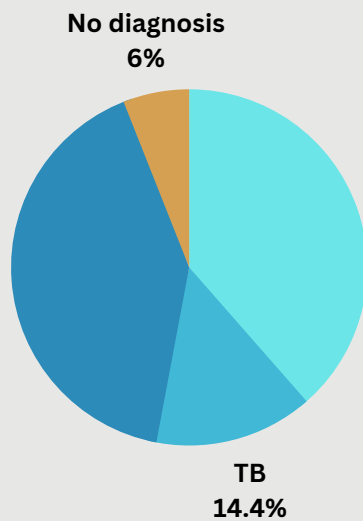
- Non-infectious
- TB septic arthritis or
- Pyogenic arthritis from other bacteria

Results

104 children included



Non-infectious 41%



Clinical characteristics

Mean CRP, ESR and WCC

were all significantly higher in pyogenic arthritis compared to TB and non-infectious arthritis

BUT

No significant difference between non-infectious and TB arthritis

59%

Those with pyogenic infections were more likely to present with fever compared to non-infectious and TB

TB found in 15% of cases

and children with TB arthritis were indistinguishable from those with non-infectious arthritides

Clinical Challenge

Kocher criteria cannot be used to distinguish infected vs uninfected joints in regions with endemic TB



Laboratory Challenge

Inflammatory marker thresholds used in Kocher are too low for the Cape Town population, leading to reduced predictive values of clinical criteria

Conclusion

In areas of high population burden of TB, more invasive clinical studies - including joint aspiration and synovial biopsy - are necessary in order to eliminate TB as a cause of a paediatric painful, swollen joint.

