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Apparent Leg Length Discrepancy Due to Transient Synovitis: A Case Report



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ABSTRACT

Our study focuses on a seven-year-old girl child who visited a hospital with right leg pain and difficulty in walking. She was then diagnosed with transient synovitis due to which she had developed apparent leg length discrepancy. The treatment was mainly focused on an NSAID drug Naproxen and three weeks of bed rest.



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INTRODUCTION

Transient synovitis (TS) is an acute, non-specific, inflammatory process affecting the joint synovium. TS of the hip is a common cause of hip pain in the pediatric patient population.¹The exact etiology of TS is unknown. Proposed risk factors include but are not limited to:

- preceding upper respiratory infection (URI)
- preceding bacterial infection
- post-streptococcal toxic synovitis
- preceding trauma²

Leg length discrepancy can be noticed commonly in the general population occurring naturally without any secondary side effects it also can be noticed in some patients after surgical treatment of fractures or joint replacement surgery. LLD can badly affect the lower back, pelvis, hips, knees as well as gait.³

CASE REPORT

A seven-year old girl visited the orthopedics department of a tertiary care hospital with complaints of right leg pain and difficulty in walking. She had a history of fall a week back. She had no other co-morbidities. By analyzing her walking pattern it was found that she had a lengthening of right leg due to which she limped. Physical examination was done by flexion, abduction, and external rotation. The patient showed pain in the hip and limitation in range of motion. X-ray of lateral, AP and frog-leg view has taken which clearly showed the variation of hip position as the right hip was located downwards. The diagnosis was transient synovitis that occurred as a result of trauma due to fall, due to which apparent leg length discrepancy occurred. The patient was treated with an NSAID drug Naproxen at a dose of 250mg twice daily for reducing the edematous inflammation thereby correcting the leg length and advised to take bed rest for three weeks. A follow-up was taken after a week which showed the leg length back to normal. Complaints of pain and difficulty in walking were reversed to normal.

DISCUSSION

Transient synovitis is one of the most common causes of hip pain in childhood, occurring in up to 3% of children. It can occur in infants, adolescents, and adults; its peak incidence is between 3 and 9 years of age.⁴ Our patient was a seven-year-old girl.

Unilateral hip or groin pain is the most common symptom reported; some patients may present with only a limp.⁵ Our patient had presented with leg pain, difficulty in walking, and a limp.




The diagnosis of transient synovitis is one of exclusion and relies on the history and physical examination, in combination with limited laboratory testing and AP and frog-leg lateral radiographs of the pelvis.⁵ Management involves supportive care and rest from activity. NSAIDs can be used for inflammation and pain control. Other modalities include the application of heat and/or massage modalities.¹

CONCLUSION

Synovitis is one of the causes of leg length discrepancy in children and adults. Apparent LLD due to transient synovitis that occurred as a result of any trauma is temporary and can be easily reversed within a week by proper treatment.

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