

ORIGINAL ARTICLE

Complications of Septic Arthritis of the Hip in Infancy and Childhood

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ABSTRACT

Delay of the diagnosis and treatment of septic arthritis in Hip in infancy and childhood can lead to destruction of the capital femoral epiphysis or the growth plate or both that can result in multiple complications. In This study, We reviewed medical datas of 17 patients with septic arthritis of Hip who were treated between 2000-2014 in Imam Khomeini and Golestan hospital of AHVAZ. At the last follow up, 15 patients were pain free and 2 patients had mild Hip pain. 15 cases had satisfactory range of motion . In 13 cases Hip was stable and 4 cases had unstable Hip. The average of limb length discrepancy was 2.2 cm. Early diagnosis and emergency treatment of septic arthritis of Hip can prevent complication and important late sequelaes of Hip infection.

Key Words: Septic Arthritis Of Hip; complications

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INTRODUCTION

Septic arthritis of the Hip(SAH) in infancy and childhood can result to partial or complete destruction of the capital femoral epiphysis or the growth plate or both [1]. Delay of the diagnosis and treatment of SAH may lead to several complications and sequelaes including limb length discrepancy(LLD), Subluxation and dislocation, Avascular necrosis of femoral head, Complete destruction of the femoral head and neck [2, 3]. The aim of This study was to review of complications of SAH with onset at infancy and childhood.

MATERIAL AND METHODS

We retrospectively studid the medical data's, radiographs and clinical examinations of all patient who was treated for septic arthritis of Hip in Imam Khomeini and Golestan hospital of AHVAZ between 2000-2014.

IN This study inclusion criteria was the children with history of SAH before age of 3 years.

For classification we used the choi et al classification (Figure 1) [4]. We evaluated Hip pain, LLD, Joint stability and Range of motion (ROM). The results were classified clinically by Hunka et al criteria [5]. Satisfactory results had the following conditions:

1. The joint was stable.
2. ROM of 50 degrees or more of flexion and a flexion contraction bellow 60 degrees
3. A painless Hip for the daily activities

The Hip was classified as unsatisfactory when one or more criteria were present.

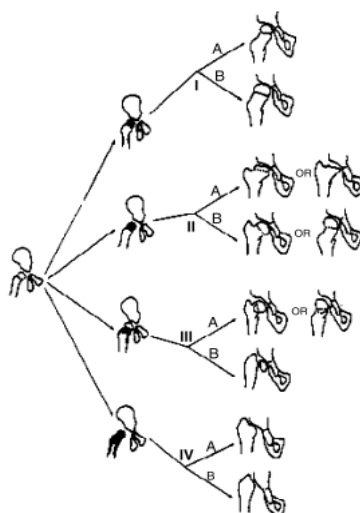


Figure 1: Choi et al classification

RESULTS

In our study, 17 patients have had inclusion criteria for review of data. The average age was 8 years old (range, 4-15 years old) at the last visit. 11 patients were boys and 6 patients were girls. The average length of follow up from at the first time of surgery was 3 years old (1-8 years old). Age of infection onset in 14 patients was in infancy and in 3 patients was in after of infancy. There was not any underlying disease in patients. After the onset of infection, only unilateral Hip joint was involved. In 88% of patients were pain free and the others had mild Hip pain. 15 patients had satisfactory ROM.

In 13 (76.4%) cases Hip was stable and 4 cases had unstable Hip. base on Hunka et al classification (5), of the 14 patients who suffered from septic arthritis in infancy, 11 cases had sequelae grade 4, and 3 cases had grade 2. The most common microorganism was staphylococcus aureus (In 10 patients), in 6 patients were infected with H. influ and in 5 cases no any microorganism was found. In 76% of patients had flexion contracture about 10-15 degrees. The average of abduction was 20-25 degrees. In our study, average of LLD was 6.6 cm (Figure 2).



Figure 2: 3 years after septic arthritis of the hip

DISCUSSION

Hip septic arthritis is an orthopaedic emergency which, treated late or inadequately, can have devastating consequences for the developing Hip joint [6]. Among children, The Hip joint is the most common that affected [7]. The diagnosis of SAH in infants and especially in newborns may be difficult. Some prognostic

factors are associated with poor outcomes and the occurrence of the sequelae. Prematurity, Virulence of the organism, age at the time of infection and delay of treatment [2, 3, 8-10] .

In several cases, Two of the major clinical problems are Hip instability and limb shortening [8]. Contributing factors for limb shortening and leg-length discrepancy include arrest of the upper femoral physis, subluxation and dislocation, malpositioning of the extremity due to soft tissue contracture and bony malalignment. For LLD treatment We have some options including:

Epiphysiodesis (LLD:2.5-5 cm), Limb Lengthening (LLD more than 5 cm), Arthrodesis and total Hip Arthroplasty. In our study, The range of LLD was 1-4.5 cm. In our study, Most of patients were in group 4 Choi *et al* (4) classification. The most common organism for Hip infection was *S. aureus* that was matching with T.BAGHDADI *et al* study [11]. Early diagnosis and emergency treatment of septic arthritis of Hip can prevent complications and important late sequelae of Hip infection.

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