

Fungal septic arthritis in the newborn

Candida albicans is seen very rarely among the causes of arthritis in the newborn. Here, we aim to present a case of septic arthritis caused by *Candida albicans*.

A 34 days old male patient with an adjusted age of 37 weeks was presented to the neonatal outpatient clinic for follow-up. The patient was born at the 32nd gestational week by cesarean section with a birth weight of 1790 g and was followed up in the neonatal service in another hospital for 34 days. Physical examination revealed a well general status and an active infant. Body weight was found to be 2180 g (10-50 P), height was found to be 46 cm (10-50 p) and systemic findings were found to be normal. Complete blood count and biochemical values were found to be normal. However, the patient was hospitalized in the neonatal care unit, since CRP value was found to be 5,7 mg/dl. After taking blood and urine samples for culture antibiotherapy was started with

8 mg/kg/day teicoplanin and 4 mg/kg/day gentamycin. When the other hospital in which he had been hospitalized was called, it was informed that the patient had stayed on the ventilator for 5 days, umbilical catheter had been placed and wide-spectrum antibiotherapy had been applied for a long term. When CRP values increased on follow-up, hip ultrasonography and abdominal ultrasonography were performed to investigate the focus of infection and found to be normal. Blood and urine cultures were negative. On the 5th day of hospitalization mild swelling and limited motion was observed in the right knee (Picture 1). Antibiotherapy was changed. Antistaphylococcal treatment was adjusted as three doses of 10 mg/kg/dose vancomycin. Knee ultrasonography was not directive. Since increase in CRP continued, vancomycin was stopped and linezolid (10 mg/kg/dose, three doses) was started. Two days later mild swelling developed in the right knee as well. Septic arthritis was diagnosed following scintigraphy and magnetic resonance imaging (Picture 2). As a result of aspiration performed on both knees, no sample could be obtained and only debridement was performed. *Candida albicans* was grown on debridement tissue culture and fluconazole was started with a loading dose of 12 mg/kg/dose and a maintaining dose of 6 mg/kg/dose was added. Treatment was continued for 6 weeks and the patient was discharged with recovery. In the 10-month follow-up no problem was found.

Two forms of septic arthritis have been identified in the neonatal period and infancy. The first form is generally seen in hospitalized, septicemic premature babies with indwelling catheter. Local infection focus may be overlooked. In the second form, an infant who is being fed normally and who has been discharged from the hospital is presented with fever or irritability and the diagnosis is



Picture 1. Swelling in the left knee

made when local signs become prominent (1,2). Our case was compatible with the first form. He was a premature infant, stayed hospitalized for a long term, had an indwelling catheter and wide spectrum antibiotics had been used.



Picture 2. MRI of the left knee

Septic arthritis caused by *Candida albicans* is not seen widely, but the actual incidence is not known (3). Generally, newborns, elderly and immunocompromised patients are affected. It may occur as monoarthritis or oligoarthritis and knee is the most commonly affected joint. It spreads by contiguity or via the blood. Osteomyelitis is present in 70-80% of the cases (3). Both knees were involved in our patient and osteomyelitis did not accompany. Deshpande et al.(4) reported gram negative agents were obtained with a rate of 33%, gram posi-

tive agents were obtained with a rate of 20% and fungal agents were obtained with a rate of 7% in joint fluid cultures in their study presenting 15 newborns with septic arthritis and noted that epidemiology of the agents changed.

For treatment mostly surgery and antibiotic therapy are used together. Although the general approach in septic arthritis is surgical debridement and antibiotic therapy following this, aspiration of the joint and antibiotic therapy may be preferred in early cases (5). In our patient, aspiration was tried first, but no specimen could be obtained and debridement was performed. Antibiotherapy which was initiated was continued. When *Candida albicans* was grown in the culture of the sample debrided, fluconazole was added to treatment.

Consequently, survival of very premature infants in the present time, use of wide spectrum antibiotics for long term and catheter applications lead to changes in the agents causing septic arthritis. Fungal agents should be absolutely considered in newborns with septic arthritis.

Nükhet Aladağ Çiftdemir

Trakya University Medical Faculty, Department of Pediatrics, Edirne, Turkey

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