Original Research Paper

Volume - 10 | Issue - 8 | August - 2020 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Neonatology

PRIMARY ILIOPSOAS ABSCESS IN A NEONATE – A CLOSE DIFFERENTIAL OF SEPTIC ARTHRITIS

Dr Anjali Agrawal Junior resident, Department of paediatrics, GMC Akola.

Dr Ashutosh Paldiwal* Assistant Professor, Department of paediatrics, GMC Akola. *Corresponding Author

Dr Vinit Warthe Head Of Department, Department of paediatrics, GMC Akola.

ABSTRACT Iliopsoas abscess (IPA) is rare in children but exceptional in neonates. A 14 days old neonate, presented with diffuse rapidly progressive left groin swelling with restriction of limb movements along with significantly raised leucocyte count, simulating septic arthritis. Ultrasound was also suggestive of septic arthritis. On further investigations, MRI revealed diagnosis of left iliopsoas muscle abscess. Ultrasound guided percutaneous aspiration was done. Intravenous systemic antibiotics were started. Neonate recovered well and discharged. To conclude, neonatal IPA is extremely rare entity and can easily be overlooked. High index of suspicion is required for its diagnosis in cases where a neonate presents with groin swelling, limited or painful movements of leg and fever. If early, aggressive and adequate treatment is not initiated, there is high risk of mortality or sequelae.

KEYWORDS : Iliopsoas Abscess, Neonate, Septic Arthritis.

INTRODUCTION

IPA is a rare disease especially in neonates. It was first described by Mynter in 1881 as 'psositis' and remains a rarely reported condition (1). Fewer than 30 cases have been reported in literature in newborns (2,3). The diagnosis of this disease is sometimes very difficult in childhood as clinical findings are suggestive of septic arthritis or osteomyelitis, as the first differential diagnosis to be ruled out (4). We present a case of neonatal IPA that on the basis of location, symptoms and ultrasonographic findings, was initially believed to be septic arthritis, which is more common in neonates than IPA. Thus, in this report we emphasis on early imaging to clarify the diagnosis.

CASE REPORT

A Full term female neonate with birth weight of 2.5kg was born by caesarean section. The pregnancy and postnatal period was uneventful and was discharged on exclusive breast feeding.

On day of life 10, a swelling was noted on left thigh with excessive crying and decreased movements of limb. 3 days after, the child was brought to paediatric department when swelling has extended to groin. There was no history of trauma or insect bite or intramuscular injection on the affected limb.

On examination, she looked well and there was ill defined swelling on left thigh till groin with redness of affected area. The movements of limb were restricted and she cried excessively on manipulation of limb. Spine was normal. Provisional diagnosis of cellulitis or septic arthritis of hip was considered.

Laboratory investigations revealed haemoglobin of 11.5g/dl, white blood cell count of 29,000 (74% neutrophils), platelet count of 4 lakhs, CRP negative. Her serology tests and blood cultures were negative. Ultrasonography was suggestive of septic arthritis. Xray hip joint was normal. Hence an ortho refrence was taken. MRI clinched the diagnosis of left iliopsoas collection likely abscess measuring nearly 62(cc) × 23(AP) × 31(T)mm with left inguinal lymphadenopathy. Diagnosis of iliopsoas abscess changed the treatment lines.

Ultrasound guided percutaneous aspiration of nearly 20cc pus was done with residual non liquefied pus of 6.5cc. Sample sent for culture and sensitivity showed methicillin resistant staphylococcus aureus sensitive to linezolid, vancomycin, amikacin, cotrimoxazole. Clinical improvement was seen within 24-48hrs of drainage. Intravenous systemic antibiotics were changed according to culture reports and continued for 3 weeks. Serial scans were done which showed disappearance of abscess after 21 days of intravenous treatment. Child was discharged on 2 weeks of oral antibiotics. On followup child did not show any sequalae and is thriving well. Immunodeficiency workup is planned to be done on follow up.

DISCUSSION

IPA is a purulent retroperitoneal collection involving the iliopsoas muscle. IPA can be primary or secondary. Primary IPA occurs more likely due to hematogenous spread from distant occult source of infection in the body because of weak immunity in neonates. This is aided by the fact that in majority of cases of primary IPA, the etiologic agent was staphylococcus aureus, which is commensal flora of skin. Secondary IPA is a result of direct extension of infection from adjacent structures into the iliopsoas muscle. Secondary IPA is more common in adults and the most common causes are intra abdominal inflammatory processes, particularly of intestinal origin . Primary IPA accounts for the majority of cases in neonates. (2,5)

The most important differential diagnosis of IPA is septic arthritis of hip joint. As in our case, primary investigations could not differentiate them. Differentiation between the two is of outmost importance as both demands different set of investigations, treatment and outcome (4). Other differentials include osteomyelitis, thrombosis, inguinal hernia (1), lymphangioma, neoplasm.

Routine hematological investigations such as complete blood count (CBC) and CRP aid in confirming inflammatory nature of swelling or mass. Xray and USG of the hip joint can be done to rule out septic arthritis. Blood cultures and aspirate cultures from abscess are, however more accurate diagnostic tools for IPA with abscess aspirate being more specific (1). Ultrasound is non-invasive and easily available modality that can be done on bedside and gives findings that are suggestive of abscess. High resolution ultrasound is also helpful in distinguishing arthritis from psoas abscess by revealing joint effusion in case of arthritis and collection in cases of IPA. However, CT scan is helpful in giving accurate and detailed information regarding extent of swelling and its volume (6). As such MRI is not needed for diagnosis but in our case MRI was done as ultrasound was suggestive of septic arthritis. Staphylococcus aureus is the most common organism isolated in IPA. In 80% of primary IPA, S. aureus has been reported as a causative agent. Eleven out of 13 cases of neonatal IPA, reviewed by Saikiran et al., had S. aureus as etiologic agent (7). Other organisms include Staphylococcus hominis, Klebsiella pneumonia and Streptococcus pneumonia (1,5,7).

Review of literature showed that appropriate antibiotics administration with open/ ultrasound guided percutaneous surgical drainage is recommended method of treatment. There has been numerous of case reports of successful ultrasound guided percutaneous drainage of IPA (8). One such is our case. IPA has also lead to diagnosis of immunodeficiency in few cases reported.

To conclude, an awareness of this exceptional infection in infants presenting with poor leg movement and swelling of the groin along with timely use of imaging studies will help in prompt diagnosis and treatment of IPA, preventing complications caused by delay. Septic arthritis though being more common if nonresponsive should be reinvestigated and reconsidered.

REFERENCES

1. Han YM, Kim AY, Lim RK, Park KH, Byun SY, Kim SH, et al. Neonatal iliopsoas abscess: The first Korean case. J Korean Med Sci 2015; 30:1203-6.
2. Nisar, M., Sikander, S., Noorain, Z., Baig, M. and Akhtar, N., 2019. Primary Iliopsoas abscess in a neonate. Journal of the College of Physicians and Surgeons Pakistan, 29 (06), S45-S47.
3. Smedegaard H, Heiring C, Hindso K, Gormsen M, Teilmann G.Hip and thigh swelling at age of 20 days. Neo rev 2015; 16:e664-e7.
4. Okan F, Ince Z, Coban A, Can G. Neonatal psoas abscess simulating septic arthritis of hip: a case report and review of literature. Turk J Pediatric2009;51:389-91.
5 Duminda H, Lamahewage A, Liyange A, Fernando D. Iliopsoas abscess due to methicillin resistant staphylococcus aureus in a 26-day-old neonate. Sri Lanka J Child Health 2015; 44:167-8.
6. Mhatre S, Daga S, Maheshgauri D. Iliopsoas Abscess in a Newborn. Pediatr Oncall J. 2015;12: 19. doi: 10.7199/ped.oncall.2015.9
7. Saikiran D, Baswaraj T. Case 2: Groin swelling and fever in a 21-day-old girl. Neo Rev 2015; 16:e183-e4.
8. Dib M, Bedu A, Garel C, Mazda K, Philippe-Chomette P, Rajguru M, et al. Iliopsoas abscess in neonates: Treatment by ultrasound-guided percutaneous drainage. Pediatr Radiol 2000; 30:677-80.