

# Case Report of Neonatal Perforated Acute Appendicitis with Meningocele

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**Abstract:** Background: however there is no age category that is secured from the appendix inflammation it is unusual in neonates. But preterm neonates can be infected more. This clinical condition mostly can be seen with other surgical conditions like hirschspuring, necrotizing enterocolitis (NEC) , meconium ileus and severe congenital heart diseases.

**Aim:** the signs of this illness are unspecific in this period so in different reasons the diagnosis of the neonatal appendicitis (NA) delayed. Inflammatory appendix is associated with perforation in 85% of cases. Precise examination and early diagnosis of this clinical condition, combined with pre-operative, patient preparation and timely appendectomy (78% neonatal appendicitis mortality reported between 1975 and 1901) reduced mortality rates to 28%.

**Case report and conclusion:** In this study I report the case of a 13 days old neonate with simple meningocele who had painful inguinal mass due to perforated of appendix presented with appropriate management (Water electrolytes control broad spectrum antibiotic therapy) before surgery cleansing and appendectomy with orchiectomy and hernotomy was successfully tolerated during the operation and the patient was successfully treated. In the short term follow up and after appropriate growth of the neonatal evacuation and meningocele repair were done successfully

**Keywords:** Neonatal appendicitis, meningocele, appendix perforation appendectomy.

## 1. INTRODUCTION:

Neonatal appendicitis (NA) is a rare clinical entity. it has a low incidence of 0.04-0.2% and is more common premature male babies. Creation of acute appendicitis in breastfeeding child less than one year is uncommon so the clinical signs are unclear and in most cases illness lead to side effect such as perforation of the appendix. Credit5 of describing the first neonatal case is disputed between Diess (1908) and Albrecht (1905), although lillenthal6 reported a survivor of scrotal appendicitis in 1908 45 years elapsed before Meagher and Lucas in 1952 documented the first survivor of abdominal disease. Another 35 years passed before proving as to what sir Zachery Cope remarked as “no age “really extends into prenatal period. Martin-Glen10. (1986) and Narasimharo et al. (1987) recorded antenatal appendicitis. Further 15 years went before hearing about the first successful laparoscopic appendectomy in neonate by Efrati et al. intrigued by the tardy progress (7) Athena looked for a review article to dwell more on this subject. Although Karaman et al (8). Summarized 141 cases collected over a century (1901- 2000) Athena (1-2) is disappointed that he entity has large he entity has largely remained anecdotal and almost all the published reports are individual case reports or at the best a small series. Therefore – she decided to critically analyze the published data to solve certain unanswered questions. Athena found that maximum number of cases have been reported from India (n=10) which is followed by turkey (n=8) USA (n=5) UK (n=4) and Canada (n=4). The high incidence in India does not appear to be due to her global first –rank in preterm population. This impression is supported by the fact that only one case has been described from chin- which is in the second position of preterm casus. Further there are no reports from Nigeria. Indonesia Malawi and Congo. Which are in successive position of having the highest preterm birth rate therefor Athena concludes the skewed distribution could be a phenomenon of publication bias or genetic susceptibility.

## 2. CASE REPORT:

Neonate male (40 weeks) ,mother’s second delivery naturally with Apgar score (8) at Balkh regional hospital. His weight was 2900grms, height 46 cm head circumference 40 cm. vital sign after birth includes: breathing 34cycle per minutes, heart rate was 120 b/min and rectal temperature 37 C0 infant received antibiotic treatment ( ampicillin and amikacin) after 12 hours of delivery liquor problems and lethargy due to meningocele puncture transmitted to NICU considering family history (parents had a family relationship they were cousins and his mother used different syrups during pregnancy ) the examination of neonate shows that cyst in the lumbar ( simple meningocele ) was punctured that with simple bandage and pad prescription were continued until second day after improvement of general and respiratory states nutrition from the mother’s milk were started . At the same time neonate has meconium pass (disposal) on the third day of birth with the general condition for consultation with the neurosurgery branch. the patient parents were transferred to baghlan province by their own request until the day 9 of birth breastfeeding continued as well as

defecation on day 11 of birth due to vomiting and abdominal distention hospitalized at baghlan public health after NPO or discontinuing oral nutrition and applying NGT he was examined at the moment of NEC Infection because culture were not available in that province the antibiotic had change (cephalothin and ceftazidime) he was admitted at ibn sina hospital on day 13 of birth due to continued abdominal pain and distention. With examination .

Redness and edema was seen in the left groin and scrotum area which is a very sensitive with palpable mass in 1x2 size. After taking simple abdominal radiography and not seeing the exact imaging of air under diaphragm. At the same time for diagnosis of testes torsion or strangulated hernia and local peritonitis abdominal ultrasonography (A/USG) was done there were same liquid in medium of left inguinal canal reported after the lab. Examination include blood glucose, sodium, potassium, creatinine, and normal Hematocrit with leukocytosis (12400 per mm<sup>3</sup>) by the diagnosis of torsion testes and strangulated hernia the patient was taken to the operating room. he was operated - and after seeing the appendix perforation in the inguinal canal with fibrin and exudates (pus) after cleaning the pus appendectomy - hernotomy and orchiectomy have been done after 3 days the patient started the eating - and day by day has weight became more after 14 days he was allowed to leave .

Pathologic reports of muscle layer hyperplasia and infiltration of polymorph nuclear cells (PMNs) in the lumen of the appendix (muscle and serosa's) were reported. All the guides for being improvement of the meningocele which was necessary has been told to his parents. After the six weeks meningocele has been discharged and restoration has been done. For the second time operation has been done and the patient was allowed to leave. After six month the patient completely get healed. Discussion: Acute appendicitis is a rare cause of acute abdomine sepsis in neonatal and never considered in the differential diagnosis. The funnel shaped wide base of appendix, liquid diet and recumbent position of the neonates are less likely to cause acute appendicitis. It is extremely difficult to make a diagnosis of acute appendicitis in neonates due to nonspecific sign and symptoms that usually result in perforation of the appendix.

Swammy et al reported one case of neonatal appendicitis who had NCE which harmfully necrosis extends up to the appendix apex. (7) The tearing of appendix in neonates is more than other ages 85% of these causes diagnosis late. Appendicitis and perforation in neonates and infants is highly non-specific the most common clinical findings at this age include abdominal distention and abdominal well swelling and redness with severe tenderness (5-6). Martin et al reported 3 perforated appendicitis due to hirschspuring (5) Shaul et al reported the same clinical finding (edema abdominal well redness) like our report include the inflammation right side of the abdomen (RLQ) also free air in the peritonium cavity under diaphragm (8) can be a good guide for diagnosis of perforated appendicitis In our study and also Golladay Bor et al inflammatory incarcerated appendix (trapped) in the inguinal canal causing neonatal obstruction (7-5). It should be noted that neonatal clinical status should be preceded by preoperative preparatory before surgery including correction of metabolic acid and electrolyte balance abnormalities and initiation prior to appendectomy should antibiotic given to the patient, if perforation had occurred. To prevent peritonitis ensure adequate drainage should be done during surgery. Whereas, the outcome of perforated appendicitis during neonate reported bad, in 70% reported the morality for the appendicitis and 90% mortality for perforation has been reported (1). Our patient was discharged 14 days after surgery in good health condition. In first six weeks our patient get weight and meningocele repair have been implemented and in the next few months, he has grown well.

### 3. CONCLUSION:

In the case of such a clinical condition after completion of the examinations, immediate pre-operative preparation should be Undertaken, including appropriate, management (Water electrolytes control broad spectrum antibiotic therapy) before surgery cleansing and appendectomy with orchiectomy and hernotomy was successfully tolerated during the operation and the patient was successfully treated. In the short term follow up and after appropriate growth of the neonatal evacuation and meningocele repair were done successfully

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