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Me conium Peritonitis: A Case Report and Review of Literature

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Abstract: *Meconium peritonitisis is a localised or generalised peritonitis of the fetal digestive tract in antenatal period. The diagnosis is made on radiological examination antenataly and early detection enables better outcomes.*

Keywords – *meconium peritonitis, pseudocyst*

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I. Introduction

Meconium peritonitis is a rare case. Most of the cases are diagnosed postnataly When the diagnosis is made antenataly the decision has to be made where and how to deliver the baby to ensure better neonatal outcomes. [1] We present a case of meconium peritonitis detected ante nataly and timely neonatal management was done.

II. Case Report

A 32 year old housewife, married for 2 years conceived a singleton pregnancy on IUI second cycle, the 32 week antenatal ultrasonography showed increased liquor quantity and the fetus was detected with an intra abdominal cyst of 8.3*6.4 cm with thick, low level internal echoes, displacing surrounding structures. The same was reconfirmed on 4D ultrasonography.

The decision was taken for elective LSCS due to the fetal abdominal cyst. At birth the baby did not cry and required bag and mask stimulation to attain spontaneous respiratory efforts and shifted to NICU care for xray which confirmed an intra abdominal cyst, abdominal ultrasonography was suggestive of meconium peritonitis and meconium pseudocyst.

The newborn was opened and intraoperatively there was a meconium cyst containing 100cc of meconium which was drained. There was diffuse atrophy of the colon and dense adhesions, 50cm of small bowel upto 0.5cm blind end of ileum brought out as ileostomy. Postoperatively the patient was on invasive mechanical ventilation and injectable antibiotics. The neonate was slowly weened off ventilator support and started on oral feeds and discharged off the NICU on 17th post operative day. The ileostomy was reversed after 6 weeks of surgery.

III. Discussion

The differential diagnosis of sonographically visualized intra abdominal cyst in a fetus is extensive and includes intestinal duplication cyst, mesenteric cyst, choledocal cyst, meconium pseudocyst, congenital cyst of the pancreas, renal cyst, obstructive uropathy, urachal cyst, ovarian cyst, ureterocoel and tumorous lesions like sacrococcygeal teratomas. [2]Meconium peritonitis is defined as localized or generalized peritonitis, aseptic, chemical or foreign body, due to leakage of meconium into the peritoneal cavity correlated with antenatal perforation of the digestive tract.The incidence of meconium peritonitis is about 1: 30,000 [3]

Meconium is a mixture of cast-off epithelial cells, bile pigment, bile salts, cholesterol, fat, stearic acid, sebaceous material from swallowed liquor, mucin and salts mixed ith pancreatic and gastric secretions by the 5th month. Meconium is considered sterile during fetal life and probably does not become contaminated by bacterial invasion until third day of life. During routine antenatal period, meconium reaches the ileocecal junction at the fourth month of gestation and the rectum by the fifth month, at birth the entire small intestine is distended with it. A blockage of this meconium during fetal life results in varying amounts of bowel distention.[4]

The chief presenting sign in cases of intrapartum peritonitis is distention which may be present immediately at birth. The infant appears to be in distress, the color is poor and respiration is grunting. Vomiting occurs soon after birth, is persistent and soon becomes bile-stained. Peristalsis is usually absent. The distention and vomiting are progressive. As a rule, no bowel movements are obtained, though in some a single meconium passage is recorded. Besides these characteristic signs of peritonitis, X ray is of the greatest value. Dilated loops of small intestine point to obstruction, areas of calcific density suggest fetal peritonitis though not necessarily

active at birth, and of greatest importance is free air in the peritoneal cavity which is best shown in the upright position. With technical advances in imaging and increasing use of high-resolution ultrasonic equipment, a significant number can now be diagnosed prenatally. Magnetic resonance imaging may also be a valuable diagnostic tool. [5]

Meconium pseudocysts are often accompanied by polyhydramnios. It is often the consequence of associated bowel atresia or extrinsic mechanical obstruction of the bowel due to mass effect. A large fetal intra abdominal mass may additionally cause fetal lung immaturity; however, percutaneous drainage of these cysts may cause leakage of the meconium into the amniotic fluid. [6]

Treatment for meconium pseudocyst usually consists of surgical resection, although there is a role for conservative management in the patient till the confirmation of diagnosis. Resection of cyst should be followed by a thorough post operative management with antibiotics and fluids to treat the infection.

IV. Figure

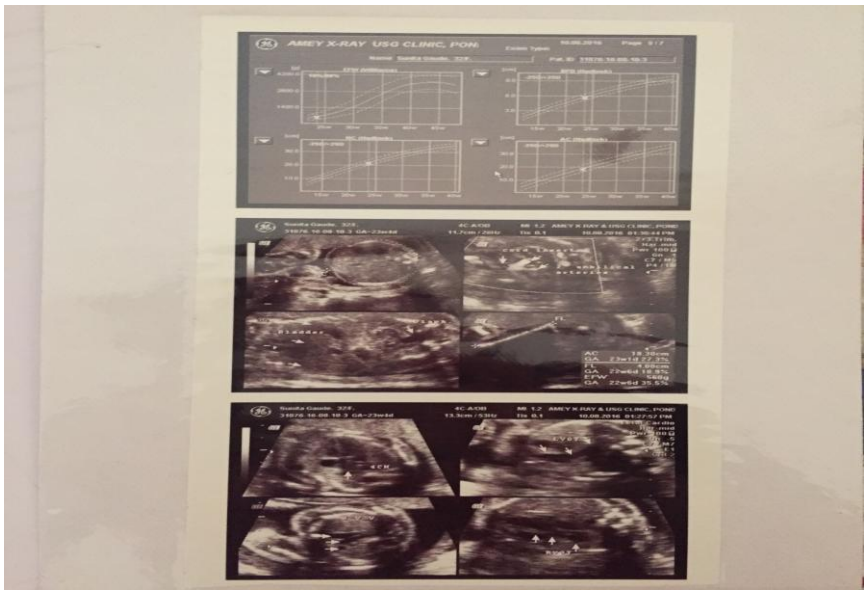

Figure 1. antenatal USG of cyst in fetal abdomen

V. Conclusion

Antenatal evaluation with ultrasonography and MRI can detect the abdominal cyst in pregnancy and help in decision regarding mode of delivery. Timing of delivery and fetal intervention according to fetal conditions should be discussed with parents, obstetrician and neonatologist in a tertiary health care set up. The surgical strategy should be selected according to the information of prenatal diagnosis enabling better neonatal outcomes.

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