Case Report

A 23-year-old gravida 2 para 1 woman, at the 33th week of gestation, was referred to our perinatology unit for second opinion ultrasound (US). The couple’s personal and family history was unremarkable and they had a non-consanguineous marriage. In the current pregnancy, she did not report any medication use, had no history of fever and exposure of radiation. First trimester screening for aneuploidy revealed a risk of <1:50000 for Down’s syndrome, and serum immunoglobulins disclosed past infections of rubella, toxoplasma and cytomegalovirus. Her pregnancy follow-up until this referral was eventless.

On gray scale US; widespread intraperitoneal, liver capsular and scrotal echogenities (calcifications) were detected (Figure 1,2). Additionally, bowels were dilated and abdominal circumference of the fetus were increased. Other sonographic findings of the fetus were normal. Pathologic features were considered as fetal MP and MPO, which is a rare benign cause of a scrotal mass in the newborn. In this case report, we present a patient with fetal MP and MPO, diagnosed at the third trimester by ultrasound.

Case Report

A male infant (birth weight, 3325 gr) was delivered by an elective caesarean section for maternal anxiety at 38 weeks of gestation and Apgar scores were 6 and 8 at 1 and 5 minutes, respectively. All growth parameters including length and head circumference were within normal limits. The infant’s first examination revealed ordinary findings except the soft, cystic and enlarged scrotal mass. At the 5th hour, bowel motions were normal and standard rectal meconium passage were seen. At the second day, feeding was commenced. Unfortunately, at the third day, general discomfort with abdominal distension were detected. Feeding was discontinued and an urgent laparotomy was performed after the X-ray showing infradiaphragmatic air. Abdominal observation revealed extensive meconium in the peritoneal cavity, fibrin plaques and caecal perforation (Figure 3). Resection and anastomosis of bowel and scrotal incisional meconium evacuation procedures were performed (Figure 4). The feeding was re-started at the sixth postoperative day. There were no complications and infant discharged in good condition two weeks later.

At the sixth month of his life, the infant was doing well.
On the other hand, mutation analysis for CF showed that the infant had a heterozygote V470 mutation on CFTR gene. He is under multidisciplinary follow up for CF and potential complications.

Discussion

Meconium peritonitis (MP) is a sterile chemical peritonitis resulting from intestinal perforation in utero. Meconium periorchitis (MPO), first described in 1953, is an extension of MP into the scrotum via a patent processus vaginalis. US is the certain instrument in prenatal diagnosis and abdominal, pelvic, scrotal calcifications, echogenic masses and bowel dilatation, which were also detected in our case, are the common findings. Moreover fetal ascites; often the first sign of MP that is secondary to both spilled contents and inflammatory response, polyhydramnios; the result of obstruction and meconium pseudocysts; in the event of localized inflammatory response, are other sonographic markers.

Meconium ileus, intestinal atresia, stenosis, internal hernia, Hirschsprung disease, intestinal volvulus, intrauterine intussusception, congenital extrinsic band, duplication and CF are the main underlying pathologies of MP and MPO. The anatomical obstructive conditions were eliminated at the time of laparotomy in our case. Furthermore mutation analysis for CF, that is responsible for 7-40% of cases of MP, revealed a heterozygote mutation in CFTR gene and pointed out the possibility of the disease. On the other, the diagnosis of CF is challenging and based upon compatible findings with biochemical or genetic confirmation. Until now, the criteria regarding the clear CF diagnosis have not been fulfilled yet but the infant is under close follow-up by pediatricians.

In conclusion we want to emphasize that in a pregnant with fetal MP and MPO, prenatal diagnosis and counselling is important for the labor in a tertiary hospital. Maternal rubella, toxoplasma and cytomegalovirus screening together with CFTR gene analysis of parents should be the first step at the
prenatal management. Furthermore invasive procedures should be offered for the certain diagnosis of these situations, particularly at early gestational weeks. Couples should be informed that the postnatal prognosis depends upon the etiology and perfect if MP and MPO is not associated with CF.10

Mekonyum Peritoniti ve Periorşiti:
Prenatal Bir Olgunun Sunumu


Anahtar Kelimeler: Mekonyum, Peritonit, Periorşit, Etyoloji

References