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A case of type 4 ileal atresia

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Objective

Small bowel atresia is the most common cause of congenital bowel obstruction and can occur in any segment of the small bowel. Its incidence is 1 per 2500 to 5000 births and 39 % of them are jejunal or ileal. Vascular ischemia and necrosis of intestinal tissue during second trimester are involved in the etiopathogenesis. Prenatally dilated bowel loop proximal to the site of atresia can be detected on ultrasound examination. Here, we present a case of fetus with multiple ileal atresia.

Methods

A 29-year-old woman gravida 2, para 1 was referred to our clinic at 25 weeks of gestation because of fetal dilated bowel. Her medical history was uneventful and included no smoking, alcohol consumption and any known teratogen exposure. The patient had no first trimester screening test and the quadruple test was in the low risk area. Ultrasound examination revealed dilated bowel loop with maximum diameter of 16 mm (Figure 1), normal amniotic fluid index, and no fetal structural abnormality. Peristaltic bowel movement was normal. The fetal biometric measurements were appropriate for gestational age. Despite the recommendation of amniocentesis due to possible genetic disease, the family did not accept invasive procedure. We repeated ultrasound evaluation at intervals of two weeks and it showed persistance of the dilated bowel loop with increase in its diameter. At 32 weeks of gestation dilated bowel loop measured 20 mm and polyhidramnios was detected (Figure 2). The patient presented with preterm premature rupture of membranes at 35 weeks of gestation and dilated bowel loop measured as 33 mm. A 2990g male infant was delivered via cesarean section with Apgar scores of 9 and 10 at 1th and 5th minutes, respectively. At the physical examination of the newborn, there was no anal and esophagus atresia, abdomen was normal with no signs of peritoneal irritation but shortness of the hands and toes was present. Genetic concultation was recommended. The results of genetic analyszes including fetal karyotype and cystic fibrosis from the peripheral blood sample were normal. An abdominal plain X-ray showed proximal dilated bowel loop without any distal air. Laparatomy was performed on postnatal day 2. At surgery, tip 4 ileal atresia was detected, atretic areas were resected and end to end anastomosis was performed. Approximately 1 month after the operation, the patient was complicated with ileus due to adhesional bridles and underwent laparotomy again. Short bowel syndrome developed and the patient was followed up in the intensive care unit after the operation and discharged at postoperative 1th month by regulating the diet.

Results

A 29-year-old woman gravida 2, para 1 was referred to our clinic at 25 weeks of gestation because of fetal dilated bowel. Her medical history was uneventful and included no smoking, alcohol consumption and any known teratogen exposure. The patient had no first trimester screening test and the quadruple test was in the low risk area. Ultrasound examination revealed dilated bowel loop with maximum diameter of 16 mm (Figure 1), normal amniotic fluid index, and no fetal structural abnormality. Peristaltic bowel movement was normal. The fetal biometric measurements were appropriate for gestational age. Despite the recommendation of amniocentesis due to possible genetic disease, the family did not accept invasive procedure. We repeated ultrasound evaluation at intervals of two weeks and it showed persistance of the dilated bowel loop with increase in its diameter. At 32 weeks of gestation dilated bowel loop measured 20 mm and polyhidramnios was detected (Figure 2). The patient presented with preterm premature rupture of membranes at 35 weeks of gestation and dilated bowel loop measured as 33 mm. A 2990g male infant was delivered via cesarean section with Apgar scores of 9 and 10 at 1th and 5th minutes, respectively. At the physical examination of the newborn, there was no anal and esophagus atresia, abdomen was normal with no signs of peritoneal irritation but shortness of the hands and toes was present. Genetic concultation was recommended. The results of genetic analyszes including fetal karyotype and cystic fibrosis from the peripheral blood sample were normal. An abdominal plain X-ray showed proximal dilated bowel

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Conclusion

Small bowel atresia is a life-threatening situation which may be complicated by luminal ocbstruction, perforation, meconium peritonitis, sepsis and short bowel syndrome. İlial atresia is the more common than jejunal type. Type 4 ileal atresia is defined as multiple atretic segments in the ileum with low survival rates. Prenatal sonografic features of small bowel atresia are quite various which include dilated bowel loop, echogenic bowel segments, ascites, cystic abdominal mass and polihidramnios. Prenatal diagnosis of small bowel atresia is quite important to be able to plan of postnatal surgical intervention and intensive care.

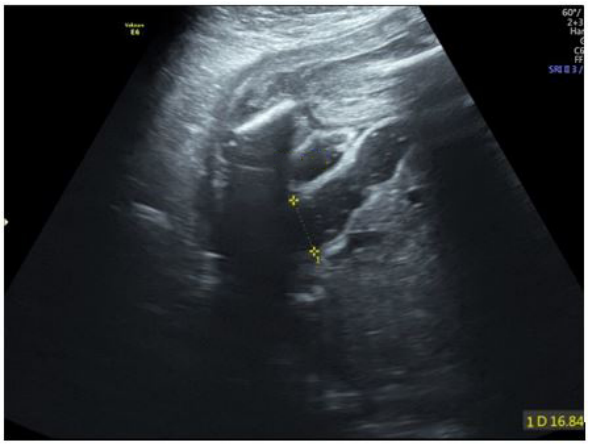

Figure 1. Fetal dilated bowel loop at 25th weeks gestation

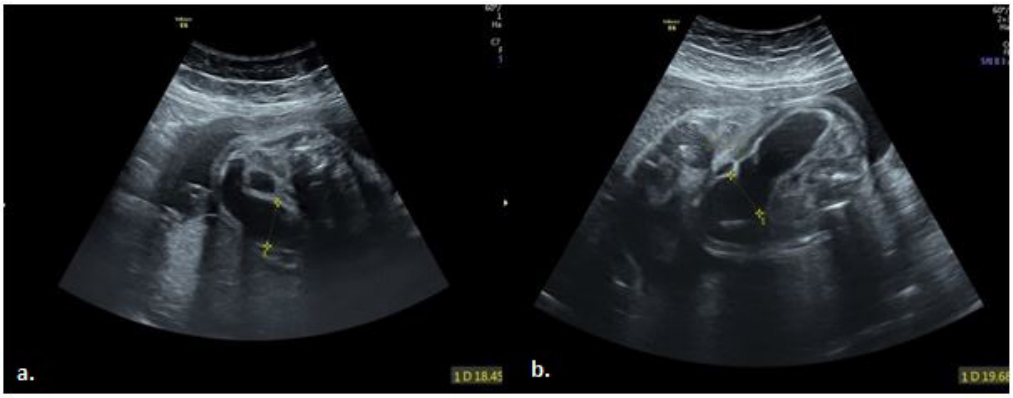

Figure 2. a) At 27th weeks, dilated bowel loop b) At 32nd weeks, dilated bowel loop