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A case of duodenal atresia

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Objective

Duodenal atresia results from failure of the recanalization of the intestinal tract between 8 and 10 gestational weeks and has a incidence of 9/100, 000. In 1/3 to 1/2 of cases duodenal atresia is an isolated finding. 30% of cases are associated with chromosomal anomalies (mostly with Down syndrome) and 2. 5% of Down syndrome have duodenal atresia. In infants with a normal karyotype duodenal atresia can be associated with other structural malformations (cardiac anomalies, etc.). On prenatal ultrasound a duodenal atresia usually shows a double bubble appearance, which is similar to the postnatal abdominal radiograph.

Methods

This is a case report.

Results

A 25-year-old nulliparous (G1P0) was referred at 28 gestational weeks due to a fetal double-bubble sign on the ultrasound scan. The risk for trisomy 21 in the first trimester screening had been 1/988 and a fetal echokardiography showed no abnomality. Hypothyroidism was treated with levothyroxine and a 50g oral glucose test was in normal ranges. An amniocentesis was suggestes to the family but declined. Follow-up scans demonstrated neither polyhydramnios nor fetal growth restriction. At 37+2 gestational weeks, a male baby (3, 600g, Apgar score 7/8) was delivered vaginally. Immediately after birth the newborn was hospitalized in the neonatal intensive care unit and fed by orogastric catheterization without oral intake. Abdominal and pelvic ultrasonography were normal, but a double bubble sign was detected on the chest radiograph. The confirmed duodenal atreasia was finally operated by pediatric surgeons on the 2nd postnatal day. The newborn was discharged with the recommendation of visiting pediatric cardiology and chest diseases outpatient clinics.

Conclusion

The prognosis for isolated duodenal atresia is very good. Mortality occurs most frequently in infants with associated medical conditions such as prematurity or respiratory distress syndrome, associated anomalies, or complications such as short gut syndrome. Echocardiography, chest radiography, renal ultrasound, rectal biopsy and cystic fibrosis mutation testing (sweat test) should be performed to assess associated anomalies. The best way to treat duodenal atresia is a duodenoduodenostomy procedure.