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Intestinal Atresia: Antenataldiagnosis and Surgical Management

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Abstract :- Small bowelatresiais a rare congenital malformation with an incidence of 1 in 5000 cases, it corresponds to complete or incomplete occlusion, depending on whether or not thereis a solution of continuity and whether the light is completely interrupted or not. It can sit at anylevel of the hail, or evenbe multiple sitting at different levels. It is characterized by an obstructive symptomatology in pre and post natal. It can besuspected and diagnosed at the end of the second trimester and in the third trimester. The main objectives of management are to eliminate a general disease with a poorprognosis, to fight against prematurity and to entrust the child immediately to the surgeon. We report a clinical observation concerning a case of intestinal at resiadiagnosed prenatal with surgical management.

Keywords *:- Intestinal Atresia, Ultrasounddiagnosis, Digestive Dilation, Malformation.*

I. INTRODUCTION

Hailatresia is among the rare congenital malformations of the digestive system with an incidence of 1/5000 cases [1]. This pathology suspecte in antenatal period by obstetricultr a sound, then the diagnosisis confirmed after birth. Scheduled childbirth and early intervention by pediatric surgeons are the key to successful care.

II. CLINICAL OBSERVATION

A 20 year old (G2P1), with a unremarkable history was sent to our unit at 19 weeks of pregnancy, our ultrasound examination revealed a diamniotic monochorionic twin pregnancy with a single fetal death and signs of twin-twin transfusion syndrome (oligohydramnios of the dead twin and polyhydramnios of the survivor). A follow-up scan at 31 weeks revealed distention of a bowel loops (figure 1, 2, 3). At 33 weeks and 4 days of gestation a premature vaginal delivery of male baby (apgar 10/10, weight: 1600g) occurred. The physical examination of the newborn revealed: ankyloglossia, testicular ectopia, moderate abdominal distention, failure to pass meconium with a normal anus. A nasogastric tube was inserted and bilious discharge obtained. A plain abdominal X-ray revealed a stomach distention (double bubble) (figure 4). The newborn was operated on day 7 with discovery of a diaphragm in the first bowel loop with extensive duodenal distention, 16 others atretic segments at different places were identified (figure 5). Surgical treatment consisted of resection of diaphragms by longitudinal incision and transverse suture. But the neonate died 24 hours later from postoperative sepsis.

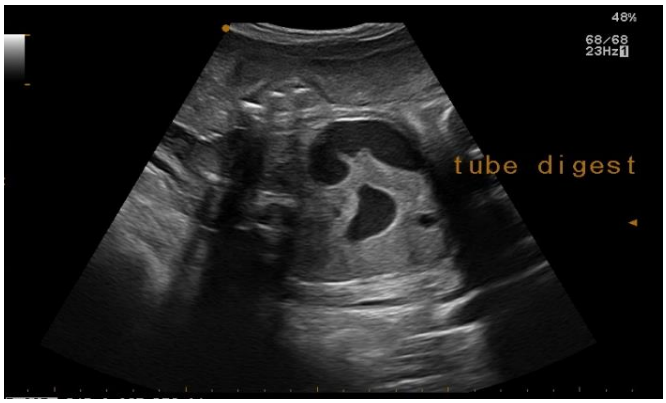

Figure 1: scan at 31 weeks shows bowelloopsdistention

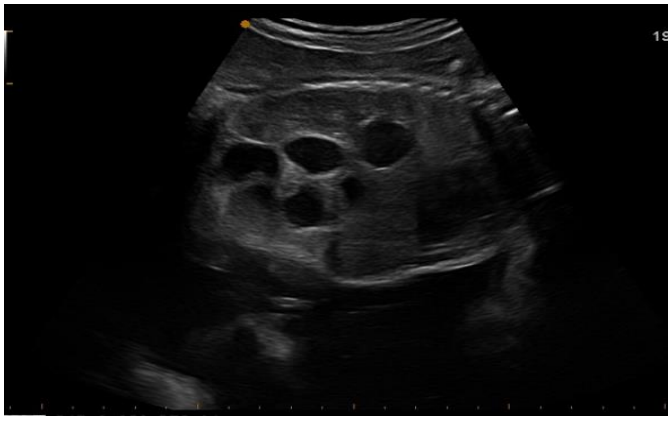
Figure 2; scan at 31 weeks shows bowelloopsdistention

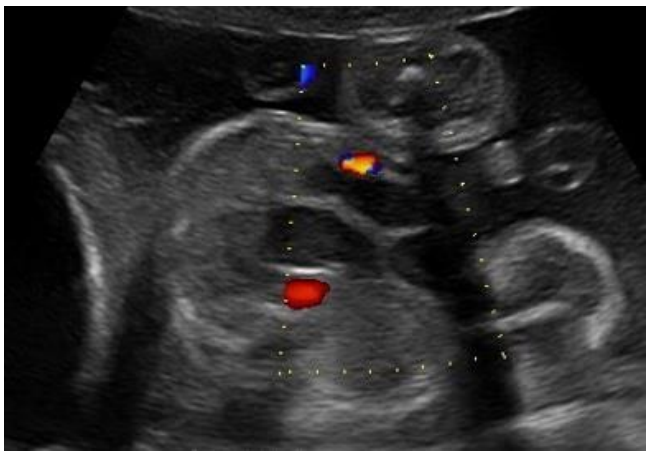
Figure 3: scan at 31 weeks shows bowelloopsdistention

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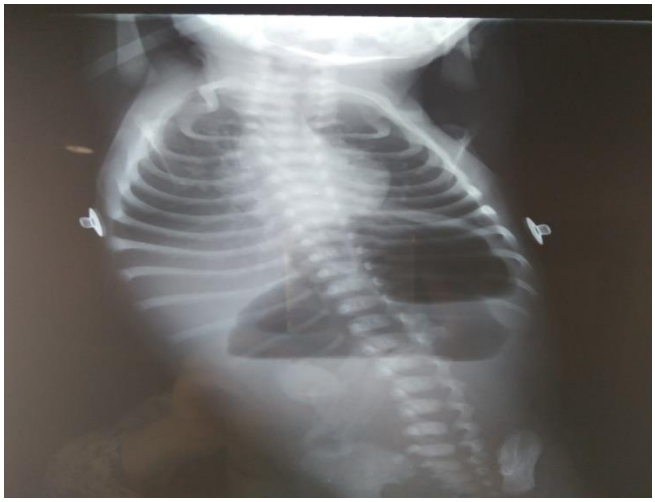

Figure 4; plain abdominal X-ray shows a stomachdistention (double bubble)

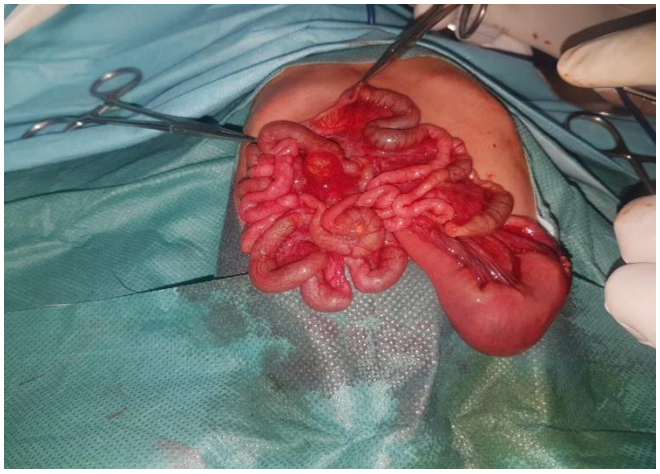

Figure 5: surgicalexploration:atretic segments at different places of bowelloops

III. DISCUSSION

Small bowel atresia is a congenital malformation that may be complete or incomplete, with the possibility of having multiple and staged atresias throughout the bowel [2]. The pathophysiology of early-onset staged intestinal atresia in fetal life is explained by the hypothesis of a bowel repermeabilization disorder. The probable mechanism of the unique small atresia would follow an episode of localized intestinal ischemia, by involvement of one of the branches of the superior mesenteric artery either due to a primary thrombotic accident or to a mechanical accident (volvulus, intussusception, laparoschisis) would result in the interruption of the continuity of the intestine [3]. Atresia of the bowel can be suspected and diagnosed with ultrasound at the end of the second and third trimester. When multiple dilated bowel loops are noted in utero it is likely going to be intestinal stenosis that is involved. The ultrasound aspect shows a disparity of significant caliber, the dilated portion upstream of the atresia zone which can involve several loops and even the duodénojejunal angle, with a diameter which can reach five to ten times the diameter of the downstream intestine, itself tiny [4]. Any atresia of the small intestine should however lead to a search for cystic fibrosis, especially in its distal forms, responsible for intestinal complications in 13% of cases [5]. An American study established that the risk of a child with small bowel atresia of having cystic fibrosis was 210 times greater than the risk for the general population [6]. Postnatal, it is revealed by bilious vomiting associated with an abdominal meteorism and the absence of meconium emission for complete ileal atresia. The abdomen without préparation shows dilation of the small intestine with the presence of central hydroaeric levels wider than high, without colonic aeration. Calcifications in the abdominal cavity testify to meconium peritonitis linked to the perforation of a loop. The search for associated malformations should be done as soon as possible, the request for examinations being guided by knowledge of the most frequent associations for each malformation. Thus, renal, cardiac and medullary ultrasound is systematic in any neonatal upper occlusion, as is a karyotype if there are facial abnormalities [7]. The advantage of antenatal diagnosis of intestinal atresias lies in the speed of surgical management in the immediate postnatal period, since it is an extreme emergency. Obstetric-surgical consultation is the key to success here. Eliminate a general disease with a poor prognosis, fight against prematurity and entrust the child immediately to the surgeon are the main objectives to be achieved. The surgical intervention will specify the type of atresia, its site, its single or multiple character and its length. The surgery depends on the etiology: simple release of Ladd's clamps; collapse of a mucous diaphragm, resection of the intestinal loop, modeling and end-to-end anastomosis restore the continuity of the small intestine [8].

IV. CONCLUSION

The prenatal diagnosis of hail atresia thanks to obstetric ultrasound in the second and third trimester is the first step for the successful management of this pathology after obstetric-surgical consultation and intervention by emergency pediatric surgeons.

Figures :
Figures : Images 1, 2, 3: scan at 31 weeks shows bowel loops distention.
Image 4: plain abdominal X-ray shows a stomach distention (double bubble)
Image 5: surgical exploration: atretic segments at different places of bowel loops

Conflict of interestsstatement: All the authors do not have anyconflicts of interest

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