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Spontaneous Resolution in Pneumoperitoneum in Premature Babies: About a Case

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Introduction:

Intestinal perforations in premature babies carry heavy morbidity and significant mortality. They are most often secondary to ulcerative necrotizing enterocolitis (UNEC) and more rarely isolated or idiopathic [1]. Perforations upstream of an organic (atresia) or functional obstacle (meconium ileus, Hirschsprung's disease) are exceptional in premature babies.

Curative treatment is surgical after stabilization of the newborn [2].

Observation

We report the case of S. Aya, female a premature baby of 30 weeks and 3 days , from a 28 year-old mother G2P0A1 with no previous history.

As a modality of birth ,an cesarean delivery for pathological FHRR with onset of RPH,

At birth: PN: 1200g (P25), T: 40cm (P54), PC: 29cm (P25), Apgar 1/ 10 and 3/10; having benefited from phase D resuscitation of ILCOR 2020 and undergo mechanical ventilation for two hours then on nCPAP, she presented moderate respiratory distress scored at 4 according to the Silverman score.

At 24 hours of life there was a clear improvement in respiratory distress but appearance of moderate abdominal bloating without vomiting. initially, meconium was emitted on time. UNEC was suspected and she was put on antibiotic therapy.

On day 4 of life, she presented a deterioration in her general condition, worsening abdominal distension with greenish vomiting, hemodynamic disorders requiring two fillings. The abdomen without preparation reveals the presence of a gaseous interhepatico-diaphragmatic crescent indicating a digestive perforation (ASP 1). After stabilization, due to the absence of adequate technical platform to low birth weights, the newborn was not operated. On day 7 of life the abdomen collapsed, the vomiting disappeared with the presence of pneumoperitoneum in the ASP (ASP2); and we decided to feed him with breast milk starting with 10 cc/kg/d and to slowly increase the feed from 10 cc to 160 cc/kg/d Antibiotic therapy was maintained until D15 of life . She tolerate it, had a good weight gain and was discharged after 3 weeks of hospitalization without radiological control.

Discussion

We report an observation of pneumoperitoneum in a 30-week premature baby, which resolved spontaneously without recourse to surgery. This pneumoperitoneum is most likely due to UNEC but the spontaneous intestinal perforation described especially in very premature babies with birth weights <1500 g cannot be eliminated [3]. several causes are put forward for the occurrence of the perforation. The absence of classic clinical and histological signs of UNEC in this group of patients meant that they classified IP as a distinct entity [2].

Thus, perforations of congenital origin due to agenesis of the gastric or intestinal musculature causing linear tear type lesions at the level of the greater curvature have been reported; then perforations of ischemic origin (neonatal suffering, septic emboli), of mechanical origin (gastric distension after excessive mask ventilation, gastric tube perforating the stomach), of medicinal origin (corticoids, indomethacin in the atrial septal defect) or of functional origin (neurological disease, gastric atony, pyloric spasm in cases of neonatal stress) [4]. Furthermore, several risk factors are associated with the condition: prematurity, low birth weight[5] , exchange transfusion, premature rupture of membranes, pregnancy toxemia, breech delivery, maternal diabetes, placenta previa, amniotic infection or even cesarean section. Among the etiological factors listed in the literature, the factors found in our observation were: extreme prematurity, a low APGAR score, neonatal distress.

In Pumberger, et al ‘s study [8] comparing epidemiological, clinical, paraclinical and radiological data, as well as intraoperative findings in newborns operated for intestinal perforation or UNEC. Their results showed that the two entities are distinct.

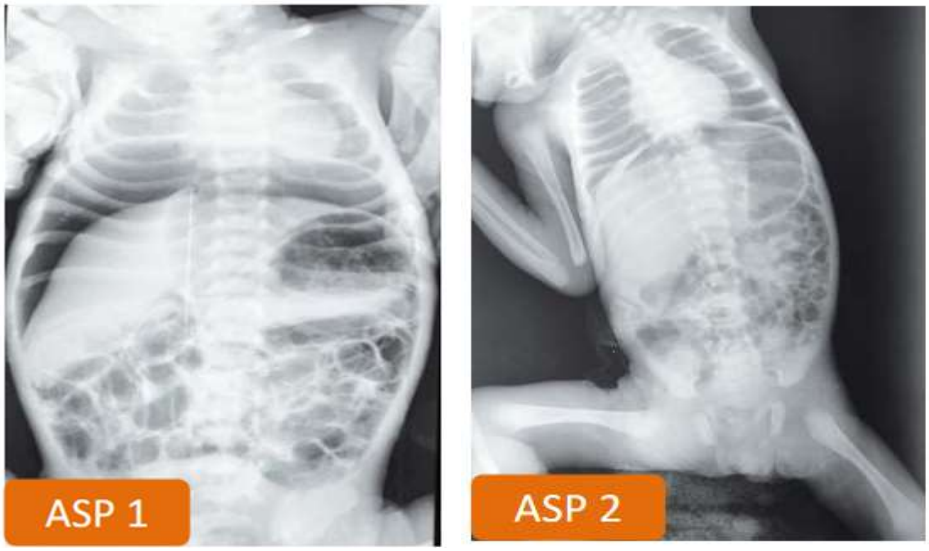
The incidence of this pathology is little described. According to some retrospective single-center studies, it concerns about 1 to 3%newborns weighing <1500 g [6, 7].

Therapeutically, in cases of intestinal pneumoperitoneum, some authors prefer immediate surgical treatment [8], peritoneal drainage being reserved for children in poor general condition and unable to tolerate general anesthesia. This drainage can be a sufficient and definitive treatment in premature children with isolated intestinal perforation [9].

The particularity of our observation is the spontaneous resolution of pneumoperitoneum without recourse to surgery.

Conclusion

The existence of pneumoperitoneum in premature babies must bring together all the clinical and paraclinical signs in favor of ulcerative-necrotizing enterocolitis in the first place. In the absence of arguments, spontaneous pneumoperitoneum should be considered and urgent intervention should be postponed.



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