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RESEARCH ARTICLE

ENCAPSULATINGMECONIUMPERITONITIS : ABOUT A CASE

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Abstract

Encapsulatingmeconiumperitonitisis a very rare digestive pathology. It is a peritonealfibrosisthat can evolveinto a peritonealshell, envelopingsome or all of the intestinal loops and forming the cocoon. This peritonitisiscaused by meconiumleakinginto the peritonealcavityfollowing perforation of the fetal intestine. It can bediagnosedantenatally. Definitivetreatmentisbased on dissection and excision of the abdominal cocoon.We report a case of a newborn patient, admitted to the National Reference Center of Neonatology and Nutrition (NRCN) for an encapsulatingmeconiumperitonitissecondary to perforation of the smallbowel, whobenefitedfrom conservative treatment and whoseevolutionwasmarked by the onset of malabsorption syndrome andexudativeenteropathy, thencomplicated by a severesepsis.

Introduction:-

Encapsulatingperitonitisis a peritonealfibrosisthat can evolveinto a veritablesclerosis, or even a peritonealshell, enveloping the intestinal loops and forming the cocoon.

This is a rare digestive pathology, first describedin 1868 by Cleland [I], and sincethenonlyaroundforty cases have been described.

Encapsulatingmeconiumperitonitisiscaused by meconiumleakinginto the peritonealcavity, secondary to perforation of the fetal intestine. The passage of meconium and digestive enzymes into the peritoneuminduces an inflammatoryreaction in the serous membranes.

Diagnosis can be made antenatally, thanks to advances in obstetricultrasound.

It can beassociatedwith a high neonatalmortality rate of 50% to 60%, and oftenrequiressurgicaltreatment[II - III] in the postnatal period.

Case Report:

A 3000 g baby boywasdelivered via spontaneous vaginaldelivery at term, in the universityhospital of Rabat, to a 33 yearsoldmother. The baby wasdiagnosedwithencapsulatingmeconiumperitonitisbased on an antenatal ultra sound.

Frombirth, our patient presentedwithsevere abdominal distension and vomiting. The newbornunderwentsurgery on the thirdday of life. Surgeryrevealedencapsulatingperitonitiswith a shellencompassing all the intestinal coves, treatmentwaslimited to peritonealcleansingwith double drainage.Then the patient wasdischargedafter a full recovery.

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The medium-termoutcomewasunfavorable. The patient wasreadmittedto the National Reference Center of Neonatology and Nutrition (NRCN) in Rabat,on the forty-seventhday of life for malabsorption syndrome due to exudativeenteropathycaused by congenital intestinal malrotation. His condition haddeterioratedfollowingsevere sepsis.

Discussion:-

Encapsulatingperitonitisis a particularvariety of peritonitis, in which the intestine isprogressivelysurrounded (imprisoned) by a pseudomembrane, whichis not the peritoneum, and appearssmooth, colorless and sometimesverythick. This pseudomembrane is a major obstacle to organ transplantation (e.g. liver transplantation), especially as itusually progresses to peritonealfibrosis and/or repeatedepisodes of intestinal obstruction.

It maybeacquired, secondary to autoimmunedisease (such as systemic lupus erythematosus), granulomatousdisease or peritonealdialysis, tumors or foreign bodies. [II- IV-V]

Or congenital, according to severalstudies the false membrane or cocoon maybederivedfrom the yolkbladderduring the twelfthweek of amenorrhea. [VI]

In this case, wethinkthat the abdominal cocoon formation isdue to meconiumperitonitis.

There are 3 types of abdominal cocoon:
- Type I: the shellcovers part of the intestine
- Type II: the shell encloses the entire intestine
- Type III: the entire intestine and anotherviscera are enclosedwithin the shell. [IV]

In this case, itis type II.

The symptoms in newbornsare notspecific and arepresentedby abdominal distension, vomiting and non-effective transit, suggestingseveraletiologies. In ourcase, the diagnosiswasantenatal.

The treatmentisessentiallysurgical, and maybe conservative, as in the case of our patient whounderwent simple peritoneal lavage, or definitive, based on dissection and excision of the shell [II-VII]. Someauthorsrecommendcombining the operationwithappendectomy [VII].

By comparingour case, whichbenefitedfroma conservative treatment, withthatdescribed by S. Ahmad in Pakistan, whounderwent a complete cure [VIII], the outcomewassimilar:both patients succumbed to severe sepsis in thepostoperativeperiod.

Conclusion:-

Encapsulatingmeconiumperitonitisis a very rare pathology, makingitdifficult to providea cleared information and advice to the parents as soon as itissuspected. Diagnosis must be made antenatally, sothat close monitoring can beadopted, marked by close collaboration between the variousperinatal care professionalsinvolved.

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