

Meconium peritonitis and maternal SARsCov 2 infection

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Objective

Meconium peritonitis is a sterile, chemical peritonitis resulting from in-utero fetal bowel perforation. Leakage of meconium is sometimes sustained throughout pregnancy or even after birth, resulting in generalized fibrosis, adhesions and ongoing inflammation. It is generally assumed that intestinal perforations are the result of primary bowel obstruction. In the case of meconium peritonitis without intestinal obstruction, there is no clear-cut explanation for the perforation. Various hypotheses, such as segmental absence of the muscular coats, absence of the muscularis mucosae, vascular occlusion, and general hypoxia of the fetus in the perinatal period, have been put forward. None of these hypotheses has been substantiated.

Methods

We report the case of a pregnant woman with a severe form of SARS-CoV-2 infection who developed a generalized secondary infection and required orotracheal intubation. During follow-up, the fetus developed mild ascites, intestinal loop dilation and peritoneal calcifications and there was a reduction in amniotic fluid volume. The diagnostic hypothesis was meconium peritonitis.

Results

Delivery was indicated due to worsening of maternal disease and the risk of fetal distress at 29 weeks and 2 days. The newborn weighed 1,499 g, the Apgar score was 3/4/7, and umbilical cord blood pH was 7.14. The newborn was intubated at 3 minutes of life. Initial physical examination revealed a reduced murmur in the lung bases and a globular, tense and hardened abdomen; the liver was palpable 4 cm from the right costal margin. The newborn presented with pneumoperitoneum and was submitted to exploratory laparotomy. Cecal perforation was diagnosed and the cecum and part of the distal jejunum were removed. Jejunostomy and antibiotic therapy resulted in good evolution of the newborn. Anatomopathological analysis of the specimen of the intestinal segment revealed acute serositis, an extensive area of hemorrhage, and vascular congestion, as well as solution of continuity with hemorrhage and foci of necrosis. The newborn and the mother evolved favorably and were discharged.

Conclusion

Maternal infection and fetal hypoxia can explain this condition.