

Images

A case of bowel perforation in a newborn exposed to cocaine in utero

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1. Case report

A full-term male neonate without perinatal problems presented with irritability, tremors, and episodes of clonus of the limbs in the first days of life. He was treated with phenobarbital. The mother was a cocaine abuser; the toxicological screen test of the newborn's urine was positive for cocaine and opiates. On the 10th day of life, the infant started presenting stools with abundant red blood and an increase in CRP levels and developed a sudden clinical deterioration with tense abdomen and sore. An abdominal X-ray showed free air in the abdominal cavity, suggesting a bowel perforation (Fig. 1). The infant underwent laparotomic surgery, during which the surgeons found an isolated perforation of the transverse colon. A segmental resection of the colon tract was performed by creating a termino-terminal anastomosis. Histological examination revealed multiple foci of transmural necrosis with perforation and serositis. The postoperative course was uneventful.

2. Discussion

Cocaine has several effects according to the different receptor mechanisms on which it interferes. It increases the

calcium flow through the endothelial membranes¹ and causes the reuptake inhibition of the presynaptic monoaminergic neurotransmitters. The mesenteric vessels

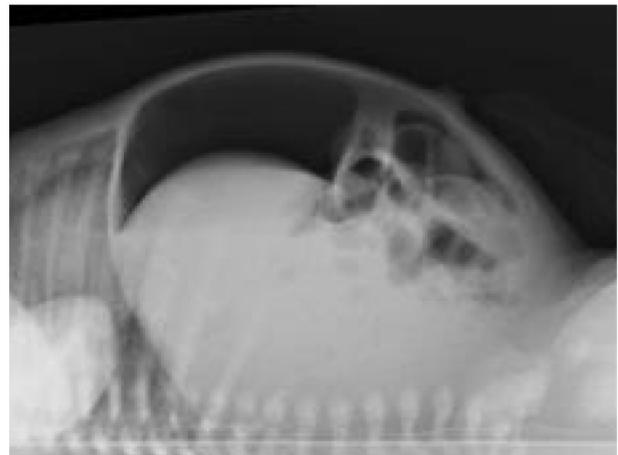


Fig. 1 X-ray of the abdomen showing free air in the abdominal cavity.

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contain several alpha-adrenergic receptors so that the splanchnic circulation is particularly susceptible to this effect.² The prothrombotic effect of cocaine facilitates the ischemic insult. The most common clinical–gastrointestinal manifestations in cocaine abusers are perforation (in the prepyloric area, ileum, splenic flexure, and rectosigmoid tract), bleeding, and ischemia.³

A few cases of neonatal bowel perforation after intra-uterine cocaine exposure have been described in the literature. Most of the previous cases had risk factors other than maternal cocaine abuse, whereas this case did not (Table S1). Hence, this case allows us to enhance exposure to cocaine as a causal isolated event of the bowel perforation.

Conflict of interest

None of the Authors have conflict of interest, real or perceived.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.pedneo.2018.09.003>.