

Delayed Small Intestine Perforation After An Ileal Serosa Injury during Caesarean Section- Case Report

Mena Abdalla & Alexander Steshenko
King's College Hospital NHS Foundation Trust - London



Objective

To share a rare case of delayed small intestine perforation after the injured ileal serosa during elective caesarean section was left unrepaired. The case is presented because of limited scientific evidence regarding the management (conservative vs surgical) of iatrogenic small intestine serosa injury.

Case report:

Thirty-four years old patient had uncomplicated pregnancy apart from developing gestational diabetes. She had induction of labour at 39 weeks gestation, which was unsuccessful. The patient opted to have a C.S. During which, small bowel loops were adherent to the abdominal-wall, likely caused by a previous laparotomy for ruptured ectopic pregnancy. A colorectal surgeon attended and performed adhesiolysis to enable access to the uterus and deliver the baby. The small bowel was intact except for an area of 10-15 mm superficial serosal injury, which was left to heal naturally. On day-3 after surgery, the patient developed abdominal pain with distension. The diagnosis of ileus was made, which was managed conservatively. However, the next day the patient developed significant abdominal-pain with pyrexia. CT scan showed small bowel perforation. An emergency laparotomy, adhesiolysis and resection of the perforated part of the small intestine with anastomosis were performed. There was peritonitis secondary to the perforation. The small bowel likely perforated in the serosa injury area. The following day the patient had washout and abdominal closure with the insertion of drains. The patient remained in the hospital for 18-days before being discharged home.

Discussion:

- The literature has shown no evidence on how iatrogenic small bowel serosa injury should be managed, so it is often left to the surgeon's discretion to decide whether to repair the serosa. In this patient, the serosa injury was not repaired, expecting it to heal naturally, which would be the case should the recovery be uncomplicated. However, the patient developed paralytic ileus, a common complication after caesarean-sections, which likely became a significant contributing factor for small intestine perforation.
- Only one in-vivo experimental trial was conducted in the past using a rabbit for a small bowel serosa injury model (Tsai et al., 2017). Serosa injuries did not perforate at physiological intraluminal pressures and 120 hours after that. The perforation occurred at increased intraluminal pressure, 4-cm long and 100% circumference serosal injuries.

Conclusion

- In cases of injuries of small intestine serosa, the surgeon should consider repairing it to avoid the risk of delayed intestinal perforation, which could be high should the patient develop postoperative paralytic ileus.