Case Report

Intussusception complicating triplet pregnancy

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ABSTRACT

Intestinal obstruction complicating pregnancy is one of the surgical emergencies that may be associated with high incidence of morbidity and mortality for both mother and fetus. Our case is a case of triplets' pregnancy at 25 weeks gestation complicated by jejunal intussusception. The patient was admitted to our hospital with acute abdominal pain and diagnosis of intussusception was made. The patient had an urgent laparotomy with excision of a gangrenous loop of small bowel and primary re-anastomosis was carried out. Post operatively she developed wound dehiscence, which was repaired, and an emergency caesarean section was made on the same setting.

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Intestinal obstruction complicating pregnancy is an uncommon but a serious disorder with significant maternal and fetal mortality. Its incidence varies between one in 1,500 to one in 66,431 deliveries.[1] Intussusception (invagination of one part of the bowel into another) during pregnancy is a very rare cause of intestinal obstruction. It is responsible for only 5% of cases whereas volvulus accounts for 24% and intra-abdominal adhesions account for 58% of cases.[2]

In the past, maternal mortality from intestinal obstruction was significantly high reaching 60% in 1900[3] but due to continuous advances in the diagnostic techniques and surgical intervention in the past 30 years, the incidence fell down to 6%.

Literature review over the past 10 years could not identify a similar case of intussusception in a triplets pregnancy.

Case report. A 32-year-old Saudi lady, G2 P1 with one previous cesarean section (CS) delivery 11 years ago, followed by 10 years of secondary infertility due to male factor. She had no significant past medical history but had an abdominoplasty operation 5 years ago. The current pregnancy followed an in vitro fertilization (IVF) technique and she had cervical cerclage operation at 14 weeks gestation outside this hospital. The patient was referred to our hospital at 25 weeks gestation complaining of increasing abdominal pain and abdominal distension associated with recurrent vomiting and absolute constipation for 9 days. She gave no history of vaginal bleeding nor discharge. She was dehydrated and tachycardiac but her temperature and blood pressure were normal. Her abdomen was slightly distended with rigidity but no rebound tenderness and the bowel sounds were present. The uterus corresponded to 26 weeks gestation and was soft, lax and not tender. Vaginal examination showed no abnormal vaginal loss and the cervix was long and closed with palpable cervical suture in situ. Rectal examination was normal. Routine blood investigations showed

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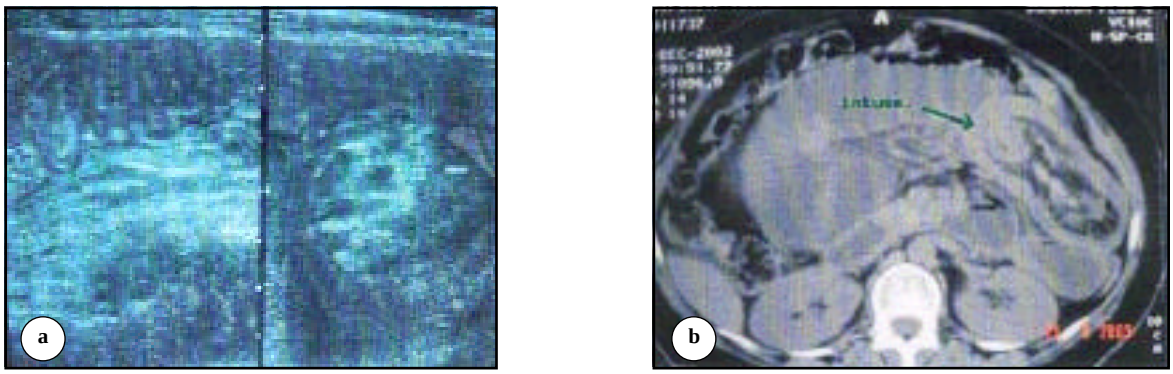

Figure 1 - Preoperative **a)** ultrasound of the upper left quadrant axial and sagittal view showing high suspicion of intestinal intussusception and **b)** limited computerized tomography scan of the upper abdomen confirming diagnosis of small bowel intussusception.

evidence of hypokalemia, hyponatremia with hemoconcentration. An abdominal and pelvic ultrasound (US) scan showed viable triplets pregnancy with estimated fetal weights between 700-800gm and an amniotic fluid index of 4.2 cm. Umbilical artery resistance index for the 3 fetuses was normal. There was a localized small intestinal thickening along the upper abdomen with suspicion of small intestinal intussusception. The patient was hydrated and electrolytes disturbance were corrected and she underwent a laparotomy through a midline supra umbilical incision. There was a jejuna-jejunal intussusception of 30 cm with gangrenous loop of small bowel that was excised and primary anastomosis was carried out (**Figures 1a & 1b**). Histology was later reported as gangrenous small bowel with small benign adenomatous polyp. The patient's initial postoperative period was uneventful but a week later, fetal US scan revealed viable fetuses with severe oligohydramnios and an amniotic fluid index of one cm. Umbilical artery resistance index of the 3 fetuses was normal. In view of the severe oligohydramnios but normal Doppler, it was decided to deliver the patient at 28 weeks gestation by CS to reduce the risk of pulmonary hypoplasia. On the nineth postoperative day, the patient had wound dehiscence that required urgent repair. An emergency lower segment CS, and removal of cervical cerclage were carried out with the delivery of 3 babies. The first 2 babies were boys weighing 855 gm and 905 gm and the third was a baby girl weighing 933 gm. The second infant died at one hour of age from severe pulmonary hypoplasia and the other 2 were admitted to the Neonatal Intensive Care Unit and later discharged home alive and well.

Discussion. There was a long history of secondary infertility and delayed presentation to our hospital. Although the index pregnancy was very precious. However, the clinical picture and the preoperative US and CT diagnosis necessitated the laparotomy and bowel resection, inspite of possible maternal risks from surgery, namely, hemorrhage, infection and anesthetic complications. Also, possible fetal risks from exposure to anesthesia as premature labor, low birth weight neonates and perinatal deaths.[4-6] However, good anesthetic and surgical techniques and avoiding handling the gravid uterus helped to decrease the above risks. The precipitating factor for the intussusception was a benign adenomatous polyp acting as a leading[7] point similar to the non-pregnant state. The increase risk of wound infection after resection of gangrenous bowel together with increased intra abdominal pressure by the gravid uterus a predisposed to wound dehiscence.[8] We could not identify the cause of the oligohydramnios apart from placental insufficiency. Fetal monitoring using Doppler study or even cardiotocography proved difficult in the presence of laparotomy scar and severe oligohydramnios. In view of difficult fetal monitoring and to reduce the risk of pulmonary hypoplasia secondary to oligohydramnios it was decided to deliver the patient at 28 weeks. However, their was a need for an emergency laparotomy resulted in changing the earlier decision to save the patient, another major surgery was carried out over a short period of time. The CS was carried out through a Pfannenstiel's incision away from the laparotomy scar to reduce the risk of surgical site infection. The early neonatal loss of the second baby was secondary to severe pulmonary hypoplasia most likely complicating antenatal oligohydramnios. The presence of pregnancy may delay the diagnosis of the cause of acute abdomen, however, with the advance of imaging techniques,[9] may prove the diagnosis easier. The surgical management of acute

intestinal obstruction is usually similar to the non–pregnant state. The combined expertise of obstetrician, anesthesiologist and surgeon are needed to manage the pregnant patient who requires emergency surgery.

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