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Intestinal Obstruction and Pregnancy

Review and Report of a Case*

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Abstract

With modern anesthetic agents, blood replacement, and more effective antimicrobial agents, surgical procedures have increased markedly in the last 50 years. The most common cause of intestinal obstruction are adhesions acquired after abdominal operations.[1] With more laparotomies being performed on young women the risk of later obstruction increases the incidence of bowel obstruction during pregnancy,[2,3] Furthermore, the situation is of significant maternal and fetal morbidity[2,4] because of delayed diagnosis, reluctance to operate on pregnant women, and inadequate preparation for surgery. To illustrate the difficulty in diagnosis and management of bowel obstruction during labor, a case is presented in some detail.

Case Report

A 30-year-old woman (gravida IV para III) was admitted to hospital in labor on August 21, 1980, and delivered normally eight hours after the onset of labor.

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In September 1979 the patient underwent bilateral total adrenalectomy through an upper transverse abdominal incision for Cushing's syndrome and was given replacement therapy that was continued throughout the pregnancy.

The patient developed abdominal pain and vomiting a few hours before she was admitted in labor. The pain was colicky in nature and intermittent, and for 48 hours prior to the onset of labor, there was no bowel motion. These complaints, related to pregnancy and labor, were not given much attention. However, these continued, becoming worse after delivery.

An endocrinology consultation was obtained to assess the adequacy of replacement therapy and the dose of cortisone acetate was increased with no improvement. She had tachycardia but no fever. The abdomen became distended and tender and bowel sounds were exaggerated. Leukocyte count was 6,000/mm ^{3}. Plain x-ray of the abdomen showed multiple air-fluid levels and the diagnosis of bowel obstruction was highly suspected.

A laparotomy was performed and revealed about 30 cm of the distal ileum twisted around an adhesive band. It was gangrenous, thin-walled, and necrotic. Resection and ileo-ileal anastomosis was carried out. Recovery was smooth and the patient was discharged on the 7th postoperative day in good condition.

Discussion

Intestinal obstruction in pregnancy was first reported by Houston in 1830.[5] Since then the incidence has been rising. In 1940, Smith and Bartlett[6] could report only one case among 66,431 deliveries. In 1948, Mathews and Mitchell[7] found one in every 12,000 deliveries and Morris,[3] in 1965, described one case in every 3,161 deliveries.

Adhesions are most likely to precipitate obstruction during pregnancy[8] in the fourth to fifth months when the uterus enlarges into the abdomen; in the eighth to ninth months when the fetal head descends into the pelvis; and, finally, immediately after delivery. A high index of suspicion of obstruction must be maintained when pain, vomiting, constipation, and obstipation occur during pregnancy in patients with a history of laparotomy especially in the first pregnancy after the

operation.[9] Roentgenographic examination must be obtained if intestinal obstruction is suspected. Such examination is the single most important diagnostic procedure for detecting obstruction.[8]

Surgical intervention must be properly timed. Hypovolemia and electrolyte imbalance should be corrected and the gastrointestinal tract decompressed by nasogastric tube. Cesarean section should be done if pregnancy is at, or near, term and if more extensive surgery is required, emptying of the uterus for adequate visualization is advisable.

Because of the delay in diagnosis and the reluctance to operate on pregnant women, the mortality rate is high. Morris[3] reported a mortality rate of 11.5% among 26 patients.

Little mention is made of the fetal outcome in the collected series of obstruction in pregnancy.[10] Bellingham et al.[4] reported premature labor with subsequent neonatal death in two out of six of their patients with second trimester obstruction, whereas Harer[2] reported 47% perinatal loss in third trimester obstruction. Hypoxia and hypotension during anesthesia should be prevented as these are the most common causes of fetal death.

Conclusion

The frequency of intestinal obstruction during pregnancy is rising. A high index of suspicion must be maintained. Mathews and Mitchell's[7] statement "let an abdominal scar on a pregnant woman be a line of evidence denoting potential obstruction" should always be remembered by obstetricians and surgeons alike.

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