CASE REPORT

Pregnancy with Sigmoid Volvulus - A rare Clinical Entity

Farhana Dewan [1], Ahmed Sayeed [2], Rumana Nazneen [3], Kishwar Sultana [4]
Sharifun Nessa[5], Rowshan Ara Begum [6]

Abstract:

Pregnancy with acute Intestinal Obstruction is very uncommon condition. Incidence of this condition is 1/2500 to 1/3500 pregnancies[1]. Diagnosis is difficult because of the rarity of the condition and due to presence of pregnancy. On admission, she was anxious, abdomen was hugely distended and mild tender on palpation. Symphysio-fundal height could not be ascertained. Foetal heart sound was audible and regular. Her bowel was hyper-resonant. Surgical consultation was given and it was diagnosed to be a case of volvulus of sigmoid colon complicating pregnancy decision to start with conservative management was taken. But since her condition did not improve, laparatomy was done on the following day 20th June 2004. The sigmoid colon was hugely distended and twisted but not gangrenous. Caesarean section with BLTL, followed by resection anastomosis of sigmoid colon was done. postoperative recovery was uneventful and she was discharged on her 10th postoperative day.

Background

Intestinal obstruction complicates approx imately 1/2500 to 1/3500 pregnancies and is increasingly being reported as a cause of acute abdominal pain requiring surgery in pregnancy[1]. Approximately 60% of cases are due to adhesions [2]. Diagnosis of this condition is difficult because of the rarity of the condition and due to the presence of pregnancy. Sigmoid volvulus which comprises of 75% of colonic volvulus occurs due to a loop of colon which twists on redundant mesentery, causing bowel obstruction, compromising blood flow and may result in gangrene. The patient presents with acute abdominal pain, anorexia constipation, cramps, nausea /vomiting.

Case History

The patient Mrs. poppy, 28 years old house wife para 1 (by C/S) gravida 2nd hailing from Narayangonj presented on 18th June 2004 with 37 weeks pregnancy with intermittent abdominal pain, vomiting and mild degree of temperature for 4 days.

It was her planned pregnancy and she had regular antenatal checkup in a local clinic. Her LMP was on 29th September 2003 and her EDD was to be on 6th July 2006. Her pregnancy was uneventful till 37 weeks, when she developed severe abdominal pain constipation, vomiting and low-grade fever. With these complains she was admitted in a clinic and referred to our hospital for further management.

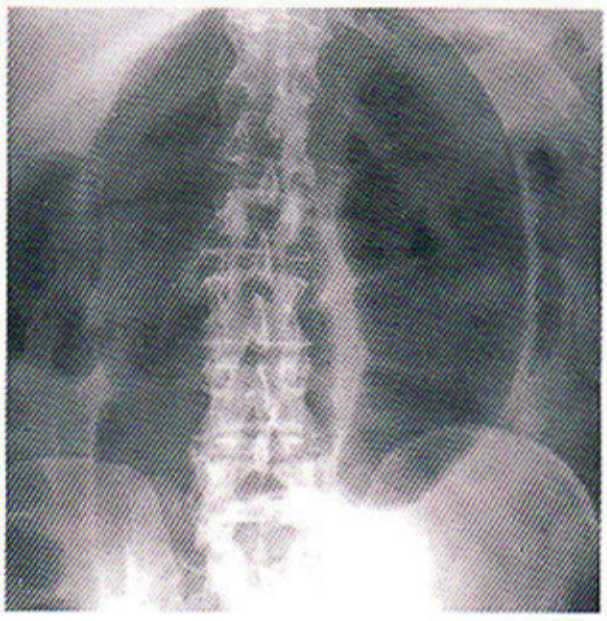
Mrs. Poppy is married for 7 year, the 1st baby being delivered by Caesarean Section 6 years back. Her past history revealed that she had acute volvulus of sigmoid colon in 1999 for which laparotomy and plication surgery was done at a local hospital.

She has no other medical problem except for constipation. On examination, she was anxious looking, pulse 100/min, BP 130/90mmHg, and respiration shallow. Abdomen was hugely distended and moderately tender on palpation. Symphysio-fundal height could not be delineated; fetal heart sound was audible and regular. Surgical consultation was given. Plain

1. Assoc. Prof. of Dept. of Obs. & Gynae, HFRCMCH
2. Assoc. Prof. of Dept. of Surgery, HFRCMCH
3. Resident, Dept. of Obs. & Gynae, HFRCMCH
4. Resident, Dept. of Obs. & Gynae, HFRCMCH
5. Consultant, Dept. of Obs. & Gynae, HFRCMCH
6. Professor, Dept. of Obs. & Gynae, HFRCMCH

X-ray showed sigmoid volvulus. Clinical evidence did not suggest any gangrene or peritonitis. So, conservative management was advised.

Flatus tube was introduced per rectally with some result but obstruction was not relieved totally. Her blood biochemical report revealed Hb% 74 gm%, Tc 12,600 dl/ml, RBS 10.65 mmol/L. Other parameters were within normal limits; but since her general and abdominal conditions were not showing signs of improvement, decision for laparotomy was taken. On 20th June 2004 a healthy but small (weight 2 kg) male baby was delivered by caesarean section. The sigmoid colon was found to be hugely dilated and there was 1½ twist at the sigmoid mesocolon. There was no gangrene. The gut was untwisted and resection of redundant colon with end-to-end anastomosis was done. Her post operative period was uneventful and she was discharged on the 10th post operative day.



Discussion

Large bowel obstruction is an emergency condition that requires early identification and when necessary prompt surgical intervention. Colonic obstruction that occurs from rotating or twisting of caecum or sigmoid colon causes abrupt onset of symptoms. Sigmoid volvulus is one of the frequent occurring surgical diseases, which usually occurs in older individuals. Detailed records of this disease were found in the Egyptian papyrus (Ebers Broth well et al, 1967) and in ancient Greek and Roman writings. Insufflations with air to untwist a sigmoid volvulus, a mode of treatment which Hippocretus had advocated is still the basis for the non operative approach in the treatment of sigmoid volvulus accepted by surgeons worldwide.[4,8]

Early recognition of colonic obstruction is essential as serosa can expand to only a variable but limited diameter before rupture and faecal soilage of the peritoneal cavity occurs.

As the colon twists on its mesentery, venous drainage and arterial flow are compromised by a closed loop obstruction. Appearance on abdominal (KUB) film is classic. Abdominal X-ray shows distension of small bowel or colon. Barium enema is useful for diagnosis of colonic obstruction and may be therapeutic in intussusceptions.

Untwisting the loop by sigmoidoscope or colonoscope is sometime, successful. Recurrence rate is high (40%). Elective sigmoid colectomy and end-to-end anastomosis is done to prevent recurrence.[3] Surgery is done in case of suspected strangulation or unsuccessful nonoperative reduction. Laboratory investigation include rise in WBC, count, haematocrit count, BUN, S. createnine, serum level and acidotic blood gas level. No single or series of lab studies are useful in diagnosis of intestinal strangulation. Imaging is relatively specific-abdominal and chest radiographs;

distension of small bowel or colon; air fluid levels and lack of colonic gas; free intrapritoneal air (Strangulation with perforation), 'bird beak' lesion in colonic volvulus are useful.
Delay in diagnosis is common and is often the explanation of the morbidity and mortality that accompanies intestinal obstruction in pregnancy. High maternal and fetal mortality rates of 10-20% and 30-50% respectively are reported especially if the obstruction is complicated by strangulation and /or perforation, or fluid and electrolyte imbalance.[9]

In this case, as the pregnancy was associated with sigmoid volvulus, the condition was aggravated. The previous surgery was not adequate as it is apparent that the problem recurred within 5 years of surgery and complicated her pregnancy. Nevertheless prompt intervention in this case has saved the mother and the newborn.

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