CASE REPORT

Gangrenous bowel after vacuum assisted vaginal delivery

Amjad Siraj Memon, Amna Bhatti, Khursheed A Samo, Javed Ahmed

Abstract:
Gangrenous large bowel after an uneventful vacuum assisted vaginal delivery is a rare entity. Gangrenous bowel which presents as peritonitis has a significant morbidity and mortality if not operated early. Hence early diagnosis and management is of utmost importance. This is a case of 19 years old female who presented with generalized abdominal pain on second day of her vacuum assisted vaginal delivery. She was diagnosed as a case of acute peritonitis and her exploratory laparotomy was done which showed gangrenous left colon from splenic flexure to rectosigmoid junction. Left hemicolectomy with end colostomy (Hartman's procedure) was done.

Keywords: Gangrenous large bowel, peritonitis, vacuum assisted vaginal delivery, Hartman's procedure

Introduction:
Intestinal gangrene carries high operative morbidity and mortality rates[1]. It presents as peritonitis and needs urgent surgical intervention. This is an interesting case of peritonitis secondary to gangrenous bowel presenting on second day of vacuum assisted vaginal delivery for which left hemicolectomy and end colostomy(Hartman's procedure) was done.

Case report:
A 19 years old married female from rural area of Pakistan presented with generalized abdominal pain one day after her vacuum assisted vaginal delivery. Pain was sudden in onset, severe and generalized. She had two episodes of vomiting which contained food particles and a temp of 101^{O}F was documented. On examination patient was toxic, looked pale with a pulse rate of 138/min. Abdomen was tender all over but tenderness was more pronounced in lower abdomen. Rest of the examination was unremarkable. Complete blood picture showed Hb of 9gm/dl, white count of 21,000/mm3 and platelet count of 200,000/mm3 while other biochemical investigations were within normal limits. Abdominal sonography showed mild fluid collection in right subhepatic space and around splenic flexure. She underwent exploratory laparotomy with a presumptive diagnosis of acute peritonitis.

Her exploratory laparotomy showed gangrenous left colon from splenic flexure to rectosigmoid junction. Left hemicolectomy with end colostomy (Hartman's procedure) was carried out and a drain was placed in the pelvis. Histopathology reported as transmural infarction and vasculitis. Postoperatively patient was started on TPN along with IV fluids and antibiotics. She did well for two days post operatively but then developed generalized fits along with hypertension without any previous relevant history. She was shifted to ICU for her uncontrolled fits although no metabolic cause for her fits could be documented. Obstetrician's opinion was taken who initially considered it to be postpartum eclampsia but later on ruled out on the absence of any previous history and proteinuria. Her CT scan brain was done which in physician's opinion showed some space occupying lesion, most likely a tuberculoma but was reported as normal brain scan by a radiologist. Lumbar puncture was not suggestive of tuberculous meningitis but her ESR was 50(high). She was treated with anti epileptic and antihypertensive drugs only. In the mean time she also developed large

Department of General Surgery, Surgical Unit V, Dow University of Health Sciences & Civil Hospital, Karachi
AS Memon
A Bhatti
K Samo
J Ahmed

Correspondence:
Dr Amna Bhatti
B 166, Block I, North Nazimabad,
Karachi.
021-36626845, 0300-2524033
Email:a-bhatti@live.com, abhattius@yahoo.com

Pak J Surg 2011; 27(1):73-74

right sided pleural effusion for which pleural tap was done and turbid colored fluid was sent for DR and AFB. It reported a protein of 2.5g/dl with 90% lymphocytes and fluid for AFB was negative so she was treated with antibiotics only. After 6 days of admission in ICU she was shifted back to surgical unit with a non working colostomy and abdominal distension. Her white count was 19,000 per cubic millimeter and she was febrile and tachycardiac. Ultrasonography showed fluid collection in the abdominal cavity for which she was re-explored and free fluid serous in character, amber colored was drained from abdominal cavity. This amber colored fluid was sent for DR which reported protein to be 3.27g/dl and lymphocytes 70% however fluid for acid fast bacilli was negative. Her fever subsided and her white count decreased to 13,000 per cubic millimeter. Post operatively her abdomen was soft and non tender, colostomy was working. Two days after her re-exploration she developed fits again, ESR was 58 and patient was deteriorating despite having a soft, non tender abdomen and a working colostomy. This time she was started on anti tuberculosis therapy based on clinical grounds and character of abdominal fluid and the patient responded well. Her ESR decreased to 30. Her drain and NG tube were taken out and she was allowed for sips of water initially followed by complete meals emphasizing more on a high protein diet. Patient recovered fully and was discharged home on Anti tuberculosis therapy after 1 month of hospital stay.

Discussion:

Ischemic colitis is the most common form of intestinal ischemia[2]. Gangrenous bowel most commonly occurs secondary to hernia, adhesions, volvulus, malignancy and mesenteric insufficiency[3,4]. The only way of getting a successful outcome in gangrenous bowel is early surgical intervention. Fetal distress or prolonged second stage of labour is an indication for vacuum extraction and forceps deliveries[5,6]. Cephalohematomas and jaundice in newborns are most common complications[5] but a gangrenous bowel in mother on second day of unremarkable vacuum assisted vaginal delivery as in our case is still a question. One of the possible explanation can be that pregnancy leads to a hypercoaguable state causing thromboembolism that might have involved inferior mesenteric artery or any of its branches leading to gangrene of left colon[7].

Tuberculosis is common in our population and is considered to be one of the diseases which have various astonishing presentations. Abdominal tuberculosis is more common among young adults and there is slight female preponderance[8]. Segmental or isolated colonic tuberculosis refers to involvement of the colon without ileocaecal region, and constitutes 9.2 per cent of all cases of abdominal tuberculosis[9].Peritoneal involvement, ascites and lymphadenopathy are relatively common findings[8,9]. AFB smear of ascitic fluid has low yield however ascitic fluid deaminase level >33U/l has a 95% sensitivity[9]. Polymerase chain reaction (PCR) assays promise to show rapid detection of mycobacteria[10,11].

Conclusion:

Tuberculosis is very common in our population and one needs to have a high index of suspicion towards its diagnosis. Young patients who show improvement only on anti tuberculosis therapy and nothing else should be started on anti tuberculosis therapy based on clinical grounds only is a question yet to be solved.

References:

1. Kasirajan K, Mascha E J, Heffernan D, Sifuentes J. Determinants of in-hospital mortality and length of stay for acute intestinal gangrene. The American Journal of Surgery April 2004 (Vol. 187, Issue 4, Pages 482-5
2. Zou X, Cao J, Yao Y, LiuW, Chen L. Endoscopic findings and clinicopathologic characteristics of ischemic colitis Dig, Dis Sci 2009 ;54(9)2009-15.E pub 2008
3. Barnett W O, Petro A B, and Williamsonv J W. A current appraisal of problems with gangrenous bowel. 2008
4. Tiwari S K, Kumar D, Chaudhry S, Agrawal N and Basu S. Intestinal gangrene due to mesenteric vascular occlusion Hernia (2008)12:195-197 9th August 2007 Springer Verlag 2007
5. Islam A, Hanif A A, Murtaza J N, Vacuum extraction and forceps deliveries; comparison of maternal and neonatal complications Professional Med JJan – 2008;15(1):87-90.
6. Unzila A ali, Norwitz E R, Vacuum Assisted Vaginal Delivery Rev Obstet Gynaecol.2009;2(1):5
7. Dondelinger R F, Interventional Radiology, 1990, page 646
8. Shaukat A, Shaukat A. Multi-detector CT findings in abdominal tuberculosis. Professional MedJ 2010;17(2):352-4
9. Sharma M P, Bhatia V. Abdominal Tuberculosis Indian J Med Res 120, 2004, pp 305-315
10. Irving Taylor, Colin David Johnson - 2005 - Medical - 224 pages-Recent Advances in Surgery.
11. The organization of Tuberculosis Struggle of TC Health Ministry. The book of Tuberculosis control in Turkey. Ankara, 2003;7-11.