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RESEARCH ARTICLE

SIGMOID VOLVULUS IN PREGNANCY: CASE REPORT AND REVIEW OFLITERATURE

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Abstract

An uncommon, non-obstetric source of stomach discomfort called sigmoid volvulus complicatingpregnancy necessitates immediate surgical surgery (decompression) to prevent intestinal ischemiaandperforation.Wedescribethecaseofa22yeaoldpregnantwoman whowas39weeksalongandexperienced stomach discomfort followed by constipation and vomiting. A CT scan allowed apreoperative diagnosis of sigmoid volvulus. The large bowel distension and a typical whirl sign werefound close to a sigmoid colon transition point. The patient was led to the OR where a laparotomywas performed allowing decompression of the sigmoid and the extraction of the newborn. In ourreport, we discuss the operative method used in asigmoid volvulus and differential diagnosis fromothernon-obstetricabdominalemergenciesinpregnancy.

Introduction:-

Sigmoid volvulus (SV) in pregnancy is a very rare entity which can be associated with extremely highrates of mortality and morbidity for both mother and fetus 1. The danger lies in the insidious nature ofsymptom development. Delay in presentation and diagnosis can result in bowel ischemia, which mayrequire colectomy and formation of a stoma, and also put pregnancy in jeopardy 2. Maternalcomplications includeperforation, peritonitis, andsepsis. Fetalcomplicationsincludepretermdelivery, intrauterine death, and neonatal sepsis. A high index of suspicion and use of modern imagingmodalitiesarerequiredforachieving better results for bothmotherandfetus 3.

CasePresentation

A 22-year-old woman with no significant medical or surgical history gravida 2 para 1 and an earlymiscarriage. The pregnancy proceeded normally up to 39 weeks and 2 days when the patient consultedthe obstetrical emergency department for 8-days of constipation and gases vomiting and abdominaldistention.Thephysicalexaminationrevealedageneralnormalcondition.Theabdomenwasdistended with generalized tympanism. The rectal bulb was empty at the rectal touch and theobstetrical examination was unchanged. The biological assessment showed hepatic cytolysis, a normalbloodionogramandrenalfunction,hemoglobinat13.2g/dLwhiteblood cellsat8850.Anobstetricultrasound noted good fetal vitality and an estimated fetal weight of 3200g. RCF was normal withbasal rate at 143bpm. Abdominal CT was performed and showed sigmoid colon dilatation; it wascompleted by an abdominopelvien scan which objectified a sigmoid volvulus. a laparotomy wasindicated as an emergency and allowed the extraction of a newbornwithaweight of 3800g theexploration of the peritoneal cavity revealed a sigmoid volvulus with 2 turns with viability withoutsigns of necrosis; treated only by detorsion; in note although the woman presents a dolichosigmoidwhich explains the torsion.

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The postoperative consequences were simple and the patient was referredtothedigestivesurgerydepartmentfordolichosigmoidcure.

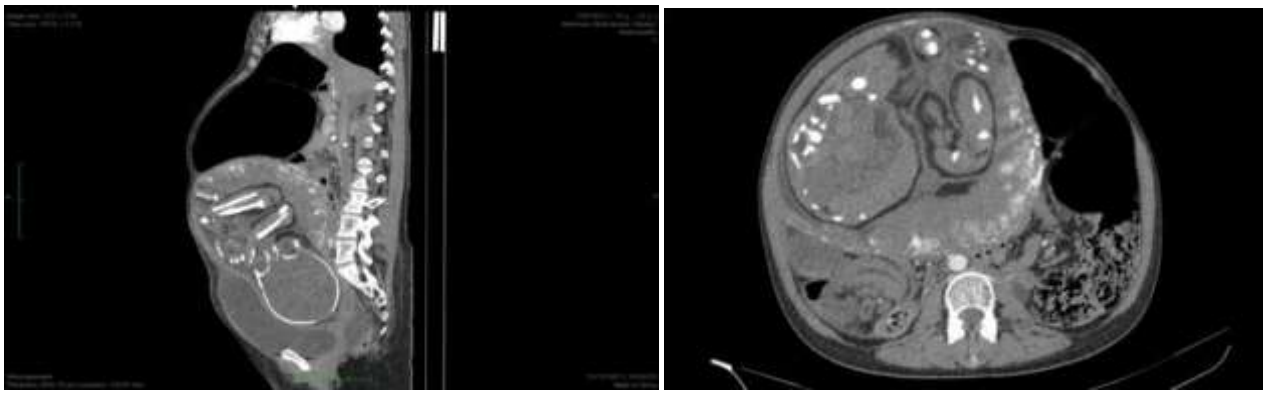

Figure 1:- Anteroposterior scout film (A) and coronal reconstruction (B) of abdominopelviccomputed tomography scan showing sigmoid colon dilatation (arrow) and rectum devoid of any gas(star).

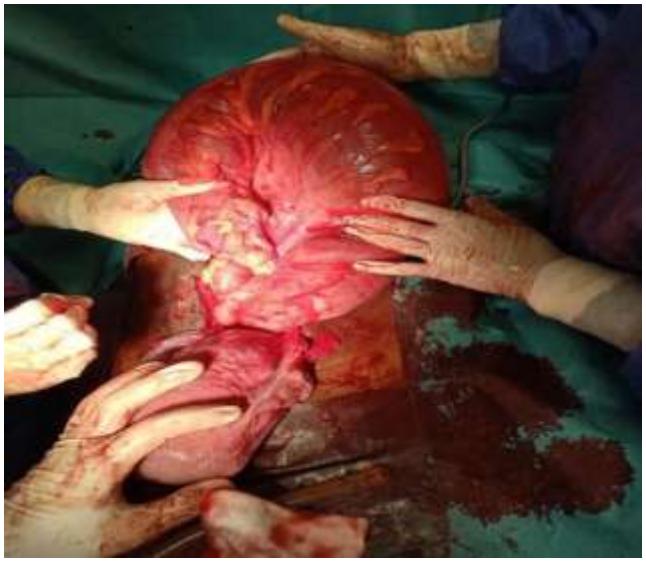

Figure2.Sigmoidcolonbeforedecompression.

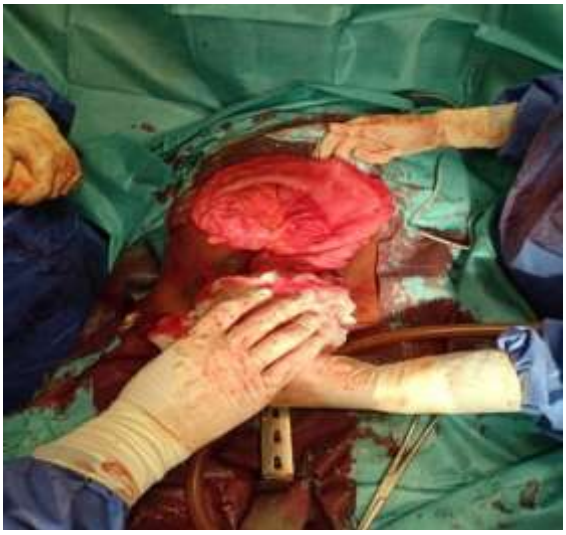

Figure3:-Sigmoidcolonafterdecompression.

Discussion:-

Sigmoid volvulus is a rare cause of intestinal obstruction in pregnancy with high maternal and fetalmortality. It is said to be caused by a redundant sigmoid colon, highfiber diet (attributed to Africanorigin), chronic constipation, and pregnancy, especially in the third trimester, owing to thedisplacement and partial compression of the sigmoid colon by the gravid uterus [1]. In our case, itappears that the sigmoid was displaced and compressed by the gravid uterus, causing sigmoidvolvulus,thoughredundantsigmoidcannotberuled out.

In recent report from the united states , a pregnant patient was treated monoperatively withendoscopic detorsion of the sigmoid volvulus until delivery of a viableinfant. Based on this presentcase , a management option for sigmoid volvulus in pregnancy is suggested . [2] In the absence ofperitonism in the first trimester, the treatment is nonoperative procedure of colonoscopicdetorsionand rectal tube compression. this can be repeated in recurrent cases until the second trimester whensigmoidcolectomy isrecommended.

The management of sigmoid volvulus in pregnancy requires a multidisciplinary approach withgeneral surgeons, obstetricians , and neonatologists. Furthermore , the patient may present withfever, dehydration, absence of bowel sound and leukocytosis. These clinical signs might easily bedetected in a non pregnant woman, but are common in pregnancy . [3]. The use of radiological toolscan be establish the diagnosis , but many clinicians are reluctant to use them for fear of fetalcomplications. However , even with plain computed tomography (CT) scans of the abdomen , theradiationdoseisstillthoughttobewithinthesafeexposurelimit (5-10rads)[4].

In addition, the reluctance to perform radiologic investigations in pregnancy my contribute todelayeddiagnosis.UltrasonographyandMRIaretheimagingtechniquesofchoice,especiallyduringthe early stages of pregnancy. [5].If a CT scan is necessary in addition to utrasonography or MRI ,orif it is the only advanced imaging technique that is readily available , as was true in our case , CTimaging shouldnotbewithheldfromapregnant patient.[6]

The first choice of treatement is rigid or flexible endoscopy unless there is a suspiscion of perforationor gangrenous colon .although there are a few cases of recurrent SV , patients should beforewarnedofthe possible iskof recurrence.Thetypeofdeliveryshouldbetailoredbycasesindividually.[7].

In our case, the extremely dilated sigmoid colon prevented us from attempting endoscopic reduction,as we did not want to increase the possibility of an iatrogenic rupture of the colon. The intraoperativefindings confirmed our suspicions, as the intestinal wall appeared to be extremely thin and prone toperforation. In cases with dead intestine, resection and formation of a stoma are the necessary actionswhich must be taken. Even though many surgeons attempt primary anastomosis in cases withuncomplicated sigmoid volvulus, this requires further thought in pregnant patients as an anastomoticleak can result in major problems to the gravid uterus and fetus [1]. In this case, the intestinal wallshowed no signs of vascular compromise, so after unwinding and decompression, the sigmoid colonwas putback in place.

In conclusion, sigmoid volvulus in pregnancy is a rare condition and early diagnosis represents achallenge. Emergency physicians should avoid considering obstructive symptoms as pregnancy-relatedandnothesitatetoperformradiologicinvestigations.

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