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Volvulus of Sigmoid Colon in Western Part of Odisha- Treatment & Outcome –A Retrospective Study

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ABSTRACT
Sigmoid volvulus is a life threatening surgical emergency which demands early surgical intervention. It is common throughout Africa, India, Iran & Russia. Through rare in united states & Europe. In endemic Regions, sigmoid volvulus accounts for 20-50% of all bowel obstructions. The mortality rate associated with sigmoid volvulus is high, estimated to be around 20% depending on treatment procedures & case conditions. The high mortality rate from sigmoid volvulus is in part due to bowel gangrene & its sequlae. Anywhere from 8-45% of cases of sigmoid volvulus have been reported to be gangrenous. X-ray abdomen erect showing of omega sign/bent inner tube sign/coffee bean sign is diagnostic sign of volvulus of the sigmoid colon.routine ultrasound abdomen and pelvis was done in all cases to exclude other abdominal pathology. Digital rectal examination-rectum was empty and ballooning was seen. Successfull management of sigmoid volvulus demands that the surgery recognize 2 distinct disease process- gangrenous & non gangrenous. 3 most common surgical option for treatment of volvulus of sigmoid colon are Resection & primary anastomosis - hartman's procedure - Meso sigmoidopexy

INTRODUCTION

Sigmoid volvulus is a common surgical emergency in many regions of the world, with significant mortality or morbidity. The aims of this study were to (a) Analysis the various types of treatments & outcomes. (b) Retrospective study of incidence in western Odisha, India.

MATERIALS AND METHODS

We analysed a retrospective clinical study of all the patients treated for sigmoid volvulus in the department of general & laparoscopic surgery, VSS IMSAR, from 2013-1015 .we selected 100 number of patient & divided them in two groups on the basis of clinical onset/ X-ray findings.

1. Patients with clear clinical signs of obstruction, obstipation, Abdominal distension, omega sign/ coffee bean sign/ inner bent tube sign on X-ray Abdomen erect.
2. Patients with subocclusive symptoms.

We focused on 6 weeks post operative mortality/ morbidity in relation to surgical timing & procedure performed for each group.

AIMS AND OBJECTIVES

The aim of this retrospective study were to :

1. Study the treatment & post operative outcome in cases of volvulus of sigmoid colon.

2. Compare our findings to the literature in order to develop an evidence based treatment algorithm for management of sigmoid volvulus.

Inclusion criteria

Any patient presenting to emergency with history of constipation, distension of abdomen, presence of coffee bean sign/ omega sign/inner bent tube on X-ray Abdomen erect with loss of haustral folding

Exclusion Criteria

Patient with x ray finding – not attritubutable to sigmoid volvulus but diffuse colonic distension were excluded from this group.

MATERIALS AND METHODS

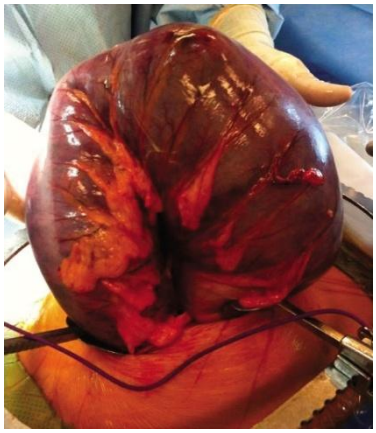
The study covers 100 Patient treated in the emergency in Dept of General & laparoscopic surgery, VSSIMSAR from 2013 to 2016 july

We collected data from Bed tickets, regarding presentation, investigation, surgical procedure, done, follow up & entered into a standard format & programming was done using Microsoft excel.

OBSERVATION

CAUSES

1. Congenital -long sigmoid meso colon with proximal narrowing is the site of torsion resulting in volvulus of sigmoid colon
2. Acquired-faecal matter loaded sigmoid colon leads to twisting on its mesentry resulting in volvulus



3. Dietary- high residual diet leading to constipation often leading to volvulus of sigmoid colon.

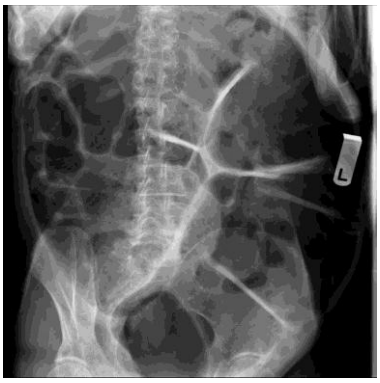
CLINICAL FEATURES

PAIN & TENDER ABDOMEN –in lower abdomen more towards left iliac fossa, lumbar region. colicky, agonizing. tenderness is present all over the abdomen more in left iliac fossa.

DISTENTION OF ABDOMEN-more in the upper abdomen

a) RESONANCE NOTE- present more on upper abdomen
b) ABSOLUTE CONSTIPATION- non passage of stool & flatus
c) BOWEL SOUND-initially high pitched but as time passes becomes sluggish.
d) DIGITAL RECTAL EXAMINATION SHOWS EMPTY AND BALOONED

RECTUM



X-ray abdomen straight showing innerbent tubes sign.

Gangrenous patient presenting with toxic symptoms like tachycardia, tachypnea with elevated temperature & hypotension were resuscitated urgently and operated

We conducted retrospective case study of patients treated for voluvulus of sigmoid colon in the department of general & laparoscopic surgery, VSS IMSAR, BURLA from 2013-2016 july.

RESULTS

PATIENTS	OBSTRUCTED PATIENTS GROUP	RECURRENT PATIENT GROUP
MALE/FEMALE	78/8	9/5
MEAN AGE	65	58
DIAGNOSTIC CASES	100	100
RESECTION & ANASTOMOSIS	67	14
HARTMANS PROCEDURE	18	0
RECTOSIGMOIDOPEXY	1	0
ANASTOMOTIC LEAKAGE	7	5
PLEURAL EFFUSION/ARDS	12	10
SEPSIS	18	15
DEATH	3	0
COMORBIDITIES		
FAECAL CONTAMINATION	3	0
PERFORATION	7	0

Generally elderly males were affected but females, young individuals were seen with volvulus of the sigmoid colon. mortality depends on time of onset & arrival to the hospital. in gangrenous cases mortality is increased. faecal contamination also resulted in higher mortalit

Resuscitation with iv fluids is of ought most importance in gangrenous sigmoid volvulus. Blood grouping and Rh typing is done in all cases as most patients require blood transfusion after operation. foleys Catheristation with Nasogastric tube is given.

Seasonal occurrence of sigmoid Volvulus		
Jan- March	23%	
April- June	22	
July- September	12%	
October- December	43%	

volvulus of sigmoid colon is seen more in winter month perhaps due to high intake of vegetable during that period.

Surgical Procedure Of Sigmoid Volvulus	
Detorsion & Mesosigmoidopexy	1
Hartmann's procedure	18
resection and anastomosis	81

Detorsion And Sigmoidopexy Is Not The Solution For Volvulus Of Sigmoid Colon As Most Cases Recur. It's Better To Do Definitive Surgery Than To Leave The Patient To Another Surgery.

Complications of surgical procedure for sigmoid volvulus	
1. Pneumonia/ARDS	22
2. Sepsis	33
3. Anastomotic leak	12
4. Death	3

CONCLUSION

Volvulus of the sigmoid colon is the 2nd most commonly occurring emergency cases operated in western Odisha.

Gangrenous sigmoid volvulus is best managed with Hartmann's procedure. resection and anastomosis is difficult in extensive gangrene of colon & edematous colon wall.

To avoid hartmanns procedure, mobilization of left colon up to splenic flexure & lengthening of omentum by dividing the right gastroepiploic artery pediclè, mobilization of rectum with omental wrapping around the anastomosis yields good result and prevents anastomotic leakage.

Non- gangrenous sigmoid volvulus is best managed with resection & Anastomosis.

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