

PERCUTANEOUS NEEDLE DECOMPRESSION OF COLON BEFORE SURGERY FOR SIGMOID VOLVULUS: A CASE REPORT

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ABSTRACT

Sigmoid volvulus is a common cause of bowel obstruction. Various treatment options have been advised by different authors with varying mortality and morbidity rates. We report an interesting case of sigmoid volvulus where patient went into peri-arrest after attempted decompression with flexible Sigmoidoscopy. We did simple manoeuvre to reduce patient's intra abdominal pressure before going for surgery.

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INTRODUCTION

Sigmoid Volvulus is one of the most common causes of large bowel obstruction¹ with bowel cancer and diverticulitis. It occurs when a loop of sigmoid colon revolves about its mesentery in elderly^{2,3}. Institutionalised and debilitated with neurological or psychiatric disease and often have history of constipation^{4,7}. The most popular treatment is to attempt untwisting with flexible Sigmoidoscopy followed by elective surgery in uncomplicated patients. Emergency surgery is required in cases of bowel perforation, gangrene, failed conservative treatment or early recurrence. We report a case of sigmoid volvulus in middle aged man where de-rotation attempt with flexible Sigmoidoscopy got complicated by abdominal compartment syndrome.

CASE REPORT

A 70yr old gentleman presented to Mid Cheshire Hospital Trust, Crewe UK with a two week history of falls, now confusion, mild abdominal pain and not opening his bowels. He had no previous medical or surgical history. No family history and previously independent. On examination neurological, cardiovascular and respiratory systems were normal. But on abdominal

examination he had a mildly tender distended abdomen with per rectal examination demonstrating an empty rectum.

Abdominal x-ray showed a sigmoid volvulus. Bloods tests revealed a Serum Sodium of 113mmol/L and CRP of 23mg/L.



Fig: CT Shot Showing sigmoid volvulus

A rigid Sigmoidoscopy was performed and a flatus tube inserted which was initially successful. The low sodium was believed to be the cause of his confusion (CT Brain normal) and was attributed to hypovolaemia on a background of alcohol excess and therefore corrected by fluid replacement.

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However two days later his abdominal distension returned and a CT scan performed which confirmed the recurrence of his sigmoid volvulus. A flexible sigmoidoscopy decompression was attempted.

Procedure has to be abandoned because patient's abdominal pain increased and patient felt very unwell. He was in a peri-arrest state with a near unrecordable blood pressure. At which point the diagnosis of "Abdominal Compartment Syndrome" was made by on-call consultant surgeon. Percutaneous needle decompression of large bowel was performed there by using two 16G intravenous cannulae. Patient's blood pressure improved immediately.

The patient then underwent laparotomy where the sigmoid colon was found to be still in volvulus, 30cm in diameter and no intra abdominal contamination. A Hartmann's Procedure was performed. Patient made satisfactory recovery. He is scheduled to have reversal of the colostomy in 4 months time.

DISCUSSION

Flexible sigmoidoscopy and decompression is first line treatment for sigmoid volvulus in uncomplicated patients. Success rate is 70%-95%^{5,8,9} with about 3% risk of complications. In this case, flexible sigmoidoscopy led to abdominal compartment syndrome. This in turn reduced venous return, cardiac out-put and led to shock. Although intra abdominal pressure was not calculated, but in this case, we did not have enough time for that as patient's clinical condition was very critical.

The interesting fact is that during laparotomy there was no intra abdominal contamination at all, given that this patient had percutaneous decompression with 16G cannulae. We appreciate this is not the current

established surgical practice but it is thought provoking "can this manoeuvre be tried and adopted as standard practice in future"?

Can Percutaneous needle decompression of sigmoid volvulus become a standard practice of future will need controlled trials of good quality, so that an emergency Hartmann's procedure can be converted to elective sigmoid colectomy and primary anastomosis.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

Hussain A: Main Idea, Operating Surgeon.
Tahir AA: Operating Surgeon, Data analysis.
Waheed R: Bibliography.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.