

A Case Report of Diverticulitis in an Adult Patient.

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ABSTRACT

One meaning of diverticulum is a wayside house of ill –fame ,certainly these ‘wayside houses’ live up to their evil reputation . Diverticula can occur from the stomach to rectosigmoid .[1]

Diverticulitis represents a spectrum of clinical entities ranging from minimal pericolicitis in the adjacent mesentery to uncontrolled intra abdominal sepsis and septic shock . Diverticular disease is one of the most prevalent medical conditions to affect western populations . They are acquired herniations of colonic mucosa through circular muscles at the points where blood vessels penetrate. It is more commonly localised to sigmoid colon but occasionally in full length of colon .[2]

The majority of individuals with diverticulosis are asymptomatic. Diverticular disease occurs when there is symptomatic diverticulosis , diverticulitis or segmental colitis .[3] It is rare in Asian and African countries because of the high fibre diet . Common in western countries , one of the most common findings identified at colonoscopy. SAINTS TRIAD- Diverticulitis , Hiatus hernia , Gallstones. The pathogenesis of diverticular disease is thought to be multifactorial and include both environmental and genetics factors in addition to historically accepted etiology of dietary fibre deficiency .

Keywords-Diverticular disease , Diverticulitis , Herniations , Colon .

I. INTRODUCTION

Diverticulosis is a clinical condition in which multiple sac like protrusions (diverticula) develop along the gastrointestinal tract . Though diverticula may form at weak points in the walls of either the small or large intestine, the majority occur in the large intestine (most commonly the sigmoid colon)

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diverticulosis, diverticulitis or associated segmental colitis .[4,5,6]

Diverticular disease and its complications continue to be a worldwide burden on healthcare system and is one of most common conditions in the western world. It is the eighth most common outpatient diagnosis in the united states with 2,734,119 total outpatient visits in 2010 . [7] Diverticulitis without haemorrhage accounted for 333,464 emergency department visits in 2010 with mortality rate of 0.3%. It was estimated that diverticulitis accounted for 216,560 hospital admission at an aggregate cost of 2.2 billion in 2012. Diverticular disease was the 16th most common cause of death among gastrointestinal , liver ,and pancreatic disease in the united states in 2012 with crude death rate of 0.9 per 100,000.

The aetiology includes low fibre diet , NSAID intake ,smoking , alcohol , individuals with steroid therapy or immunocompromised people , long standing constipation increases the stool transit time and causes diverticulosis.

There are two varieties -

1. Congenital – All three coats of bowel are present in the wall of the diverticulum .ex-Meckel’s

2. Acquired – The wall of diverticulum lacks a proper muscular coat . Most alimentary diverticula are thought to be acquired .[8]

Most of these diverticula arise from the mesenteric side of the bowel , probably as the result of mucosal herniation through the point of entry of blood vessels.

Duodenal diverticulum – There are 2 types

1. Primary – Mostly occurring in older patients on the inner wall of the second and third parts , these diverticula are found incidentally on barium meal.

2. Secondary – Diverticula of the duodenal cap result from long standing duodenal ulceration .

Jejunal diverticula – These are usually of variable size and multiple .They are more common in patients with connective tissue disorders.

Meckel's diverticulum – Occur in 2% of the population, it is situated on the antimesenteric border of the small intestine, commonly 60 cm from ileocaecal valve, and is usually 3 – 5 cm long. A Meckel's diverticulum possesses all three coats of the intestinal wall and has its own blood supply. It is therefore vulnerable to infection and obstruction in the same way as the appendix.

Sigmoid colon is main site involved. Sigmoid colon plus descending colon are involved in 80% of cases. Sigmoid plus other colonic sites are involved in 95% of cases. Rectum and ascending colons are involved in 4% each case. Diverticula occur in weaker portions of colonic wall where the vasa recta infiltrate the circular muscular layer. The vast majority of colonic diverticula are typically false diverticula which are mucosa and submucosa herniating through a defect or weakness in muscularis layer, covered externally only by serosa. True diverticula are much more uncommon (ex- Meckel's diverticulum) and involve outpouching of all layers of intestinal wall (ex- Mucosa, muscularis serosa).

A Predisposing factor for the formation of colonic diverticula is abnormal colonic motility, resulting in exaggerated segmental muscle contractions elevated intraluminal pressure and separations of colonic lumen into chambers. Complications of diverticulitis involved perforation with pericolic abscess or peritonitis, progressive stenosis, intestinal obstruction, profuse colonic haemorrhage, fistula formation – vesicocolic, vaginocolic, enterocolic, colcutaneous.

ETIOLOGY

The diverticular disease starts with an outpouching of the mucosa of the colonic wall. Inflammation at each mucosal outpouching contributes to diverticulitis. The presumed mechanism of diverticulitis is an overgrowth of bacteria due to obstruction of the diverticular base by feces with micro perforations. This theory has been challenged in recent years as some studies demonstrate that resolution of uncomplicated diverticulitis may occur without antibiotics in selected cases. [9]

PATHOPHYSIOLOGY

Despite the high prevalence of diverticulosis, the pathophysiology of the disease is not well understood. A colonic diverticulum is an outpouching of the colonic mucosa through the weakest point in the colonic lumen, where the vasa

recta penetrate the colonic wall to supply blood to the submucosa and mucosa. Patients with diverticulosis have increased intraluminal pressures during peristalsis. High colonic intraluminal pressure associated with constipation and straining during defecation was once thought to be the initiating factor resulting in mucosal herniation through the colonic wall. [10]

CASE PRESENTATION

A 21 yr old male patient presented with complaints of pain in abdomen at right iliac fossa since 2 weeks. On clinical examination, there was tenderness at right iliac fossa, Rovsing sign, rebound tenderness, psoas test positive. There was no abdominal distension, guarding, rigidity. And the pulse – 80/min, Bp – 110/70 mm of hg, CVS – S1 S2 normal, chest was clear and patient was conscious oriented.

There was no family history of associated clinical features. Patient had no history of any major illness and surgical history. In USG, there was well defined thin walled cystic lesion of size 33*20 mm seen in right iliac fossa. Free fluid with echoes seen in right iliac fossa, surrounding mesentery was echogenic s/o Mucocele of appendix with inflammatory changes in surrounding bowel loops.

Patient was taken for open appendectomy, surgical exploration brought to light that Retrocaecal inflamed appendix, multiple omental and small bowel adhesions at ileocaecal junction seen. Then, transverse abdominal incision was extended upto umbilicus, bowel traced, ileal diverticuli (multiple small diverticuli) at antimesenteric site. Then, excision of diverticuli and end to end anastomosis done. After surgery, the sample sent for histopathology examination. Histopath report shows, Acute diverticulitis with features suggestive of perforation and peritonitis, gastric (ectopic) tissue seen. Ileum shows features of peritonitis. Patient took antibiotics, analgesics, antacids and 15 days alternate day dressing, follow up wound healed well with no pain, no fever, no sensory motor deficient.

II. DISCUSSION

Diverticulitis is not uncommon, though much rarer than the state of diverticulosis. These are those of a low form of inflammation in the large bowel in its lower abdomen, spreading to neighbouring structures. In diverticular diseases,

in medical treatment includes high fibre diet , antibiotics , bulk purgatives , avoid constipation , regular follow up of progress of disease, onset of complications . In acute stages , conservative treatment like bowel rest ,antispasmodic ,antibiotics are advised.In case of perforation , or any complications are indicated for surgery.

III. CONCLUSION

Diverticular disease is a complex disease process with a number of paradigm shifts in recent years in regards to its pathogenesis and management . Diverticular disease is a common condition. It affects individual in many different ways. Much of our accepted understanding of diverticular diseases has been challenged , including the role of fiber in etiology , as well as risk factors beyond fibre deficiency , such as genetics , exercise . Further studies are still needed to better identify who is at highest risk of future complications and who will benefit most from early antibiotics and prophylactic surgery. From above case we , concluded that in every case of appendectomy surgeon should look for diverticula by tracing bowel.

REFERENCE

- [1]. Baileys and love's short practice of surgery , R.C.G.RUSSELL, Normans Williams and Christopher J.k. Bulstrode , Chapter no 68 , Edition 24th , Page no 1158
- [2]. SRB'S Manual of surgery ,SriramBhat M , Chapter no 22 Edition 6th , Page no 879.
- [3]. AlmadiMA ,Barkun AN, Patient presentation , Risk Stratification , and Initial Management in Acute Lower Gastrointestinal Bleeding .Gastrointestinal endoscopy clinics of north America . 2018.[PUBMED]
- [4]. Kosmadakis G, Albaret J , da Costa Correia E, Somda F, Aguilera D, Gastrointestinal Disorders in Peritoneal Dialysis Patients . American journal of nephrology . 2018 Oct 19[PubMed PMID : 30343294]
- [5]. Cuomo R , Cargioli M , Cassarano S, Carabotti M , Annibale B , Treatment of diverticular disease , targeting symptoms or underlying mechanisms.Current opinion in pharmacology . 2018 Oct 3 [PubMed PMID : 30291995]
- [6]. Farooqi N , Tuma F , Intestinal Fistula . 2019 jan[PubMed PMID : 30480947]
- [7]. Peery AF, crockettSD,Barritt AS , etal. Burden of gastrointestinal , liver, and pancreatic disease in the united states . Gastroenterology .2015;149:1731-1741.[PMC article][PUBMED][Google Scholar]
- [8]. Baileys and love's short practice of surgery , R.C.G.RUSSELL, Normans Williams and Christopher J.k. Bulstrode , Chapter no 68 , Edition 24th , Page no 1158
- [9]. Schieffer KM, Kline BP,Yochum GS , Koltun WA, Pathophysiology of diverticular disease . Expert review of gastroenterology [pubmed]
- [10]. RezapourM ,AliS,Stollman N, Diverticular Disease : An update on pathogenesis and Management .Gut and liver . 2018 Mar 15[PubMed PMID 28494576]