Colonic Diverticulosis And Dysplastic Polyps With Previous Fungal Peritonitis In An APD Patient.
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Abstract: Colon diverticular disease is a very common pathology in an elderly patient and represents a risk factor for septic-type complications, especially peritonitis due to perforation. We report an eighty three year hypertensive male, who had fungal peritonitis, later catheter was removed and reinserted after two months. Peritoneal biopsy was done during reinsertion of PD catheter under laproscopy, report showed mild chronic inflammation, and negative for granulomas/any other lesions. Four months later patient presented with left iliac fossa abdominal pain with fresh blood in the stool. Colonoscopy showed left sided extensive colonic diverticulosis with left sided dysplastic polyps, polypectomy was done and he continues on NIPD.

Key Words: Diverticulosis, elderly patients, peritonitis.

Introduction:
Colonic diverticulosis is a condition in which there are multiple outpouchings of the mucosa through weak spots in the muscular wall of the colon. The presence of colonic diverticulosis was once considered a relative contraindication to PD because of its association with enteric peritonitis (1-4). Later studies from other Western countries, however, found no such association (5,6). This may be due to the wide variation in diverticulosis prevalence and patient characteristics among different countries. The etiopathogenesis of colonic diverticulosis remains unclear. Increased age is a risk factor for the development of diverticulosis (7) and patients diagnosed with autosomal dominant polycystic kidney disease (ADPKD) have been reported to show a higher prevalence of diverticulosis (8). There have been no reports on whether colonic diverticulosis may affect peritonitis outcome.

Case Report:
An eighty three year old male, diagnosed with end stage renal disease with hypertensive nephropathy. The patient had been on hemodialysis since 12th January 2009 and later shifted to APD on 25th November 2010 and resolved after empirical treatment. Within a month patient had a second episode of peritonitis due to species Candida Tropicalis. Peritonitis was treated successfully with catheter removal and antifungal therapy. Two months later peritoneal biopsy was done during implantation of PD catheter under laproscopy, report showed mild chronic inflammation, and negative for granulomas.

In July 2011, patient complained of left iliac fossa pain with fresh blood in the stool. Colonoscopy showed highly vascular 3 pedunculated polypaid lesion with left sided colonic diverticulosis (Fig 1). Colonoscopic biopsy reveals polypoidal lesion composed of glands lined by cells with markedly

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pleomorphic, hyperchromatic nuclei and prominent nucleoli. There is loss of nuclear polarity. The nucleocytoplasmic ratio is increased. A brisk mitotic activity is visible with an occasional atypical mitotic figure being seen. Atypical glands are seen in the lamina propria and suggestive of Adenomatous polyp with sever dysplasia. Laboratory investigations showed serum sodium 136 mEq/L, potassium 5.2 mEq/L, Chloride 100mEq/L, Calcium 9.0 mg/dL, Phosphorus 4.9mg/dL, (Bicarbonate 20.8 mEq/L), Serum albumin 3.3gm/dl, hemoglobin 10.1gm/dl, PCV 30.4%, RBC 3.53mil/μL, MCV 86.1fl, MCH 28.6 pg, MCHC 33.2 g/dL. CT scan revealed bilateral renal cysts and evidence of peritoneal adhesion. Carcino embryonic antigen was 12.65ng/ml. Hs CRP: 0.84 mg/l. On 25th September 2011, patient underwent Colonoscopic papillectomy under heavy sedation. The procedure was uneventful & patient continuous an APD. CT Scan of abdomen with contrast showed no secondary deposits in the liver or elsewhere in the abdomen.

Discussion:

Colonic diverticulae result from outpouchings of the mucosa through weak spots in the muscular wall of the colon. As there is no associated muscular coat, the diverticula are, by definition, “false diverticulae” The etiopathogenesis of colonic diverticulosis remains unclear. Currently, most authors agree that it is a multifactorial disease comprising environmental factors, abnormal intraluminal pressure, motor dysfunction, and dietary fiber consumption (12). In addition, patients diagnosed with ADPKD have been reported to show a higher prevalence of diverticulosis (11). Even this patient had bilateral renal cysts in ultrasound. Increased age has also been associated with diverticulosis (10).

The mechanisms by which micro-organisms from the intestinal lumen gain access to the peritoneum and cause enteric peritonitis may depend on three main factors: integrity of the intestinal wall, bacterial overgrowth status in the intestinal lumen, and host peritoneal defense.

In patients with diverticulosis, the integrity of the intestinal wall is lost due to the absence of muscular coat in the walls of diverticula. Acute inflammation, stasis, and obstruction of diverticula may lead to entry of enteric organisms to the peritoneum from the intestinal lumen. Because of the association with the development of enteric peritonitis, patients with diverticulosis have been considered relatively contraindicated for PD (1–4). In Western communities, diverticulosis generally occurs on the left side of the colon; right-sided disease accounts for less than 5% of the total.(9).

The way to prevent enteric peritonitis in patients with diverticulosis is not known. High fiber diet appears to be associated with a reduced risk of developing diverticulosis related complications (13–15), but whether it can prevent the development of enteric peritonitis is not known. Prevention and treatment of constipation, using laxatives for example, may in theory reduce the risk of development of peritonitis but this should be explored through well-designed studies. Although patient had slightly elevated CEA, no evidence of local or distant metastasis was observed. In this elderly patient with Systolic dysfunction of heart, Echo findings showed LV mass:314g, IVS and PW: -14 mm, moderately severe LV dysfunction (EF:35%), type-3 diastolic dysfunction, good RV systolic function and sclerosed aortic valve.

After ensuring adequate hemostasis, through a colonoscopy papilectomy of the three dysplastic papillae were done with no complication (Fig 2). Under gram negative, aerobic and anti fungal prophylaxis. This highlights the fact that the elderly patient with iliac fossa tenderness who on APD and with fresh rectal bleeding requires appropriate endoscopic investigations in a specialized centre with surgical back up. Successful papilectomy can be done with minimum morbidity without subjecting the patient to extensive colon resection, colostomy and reanastomosis as a two stage procedure. A combined team work from nephrology to maintain adequate dialysis, endoscopy expertise and surgical back up in our elderly patient reduce morbidity and maintained the patient on PD.

Conclusion:

In elderly patient for CAPD or APD, constipation should be avoided, using laxatives and high fiber diet.

Fig 2.Colonoscopic Papilectomy of three dysplastic papillae - Specimen of the sigmoid colon
Reference:


