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Case Report

Post colonoscopy colonic perforation with parietal abscess: a rare case report

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ABSTRACT

Colonoscopy is a common method of diagnosing colon and rectum illnesses. Complications from colonoscopy are rare. However, perforation is one of the most common problems observed. The incidence is 0.005-0.085 percent. Extraperitoneal and mixed postcolonoscopy colonic perforations are classified as intraperitoneal, extraperitoneal and both combined. Extraperitoneal perforation is rare and frequently accompanied with subcutaneous emphysema and retroperitoneal abscess. Contrast CT scan is the most effective diagnostic and therapy tool. A parietal abscess after colonoscopy is quite rare. Only one incidence of post-colonoscopy retroperitoneal colonic perforation with parietal abscess has been reported. An unusual case of colonic perforation after diagnostic colonoscopy was presented with a parietal abscess on the left iliac area. The patient, a 63-year-old diabetic male, had a diagnostic colonoscopy for intestinal irregularity. Afternoon severe ache over left iliac region brought patient to doctor. Nothing notable was discovered. So, they prescribed symptomatic drugs. Symptomatic medications were prescribed but without any relief. An abdominal contrast CT was recommended to him by his doctor after a few days. This retro muscular accumulation in the left transverses abdominis muscle communicated with the sigmoid colon. No signs of peritonitis or septicemia. Patient was stable. The aspirated fluid was sent for culture and sensitivity testing, and intravenous hydration and antibiotics were commenced. Patient tolerated conservative care. The subject was discharged in 2 weeks. Diagnosis and treatment of perforation are critical to recovery.

Keywords: Colonoscopy, Colonic perforation, Parietal abscess

INTRODUCTION

Colonoscopy is widely used diagnostic as well as therapeutic tool for diseases of colon and rectum. Complications are known to occur in relation to colonoscopy. Perforation and haemorrhage are two serious complications reported in the literature.[1] Incidence varies from series to series. Overall incidence of perforation reported in the recent literature is 0.005-0.085% while incidence of bleeding is 0.001-0.687%.[1] Post colonoscopy colonic perforations are classified as intraperitoneal, extraperitoneal and both combined.[2] Intraperitoneal type is the commonest while extraperitoneal type is rare. About 50-60% occurs in recto-sigmoid region and 10-20% occurs in caecum.[3] Diagnosis is made with careful history, clinical examination and investigation. Double contrast CT scan remains the key investigation to diagnose the perforation.[4] Prognosis depends on the time elapsed from the time of perforation and type of perforation. Management is decided by clinical presentation in association with hematological and radiological tests. Development of retroperitoneal abscess in association with post colonoscopy extraperitoneal perforation has been reported in the literature.[5,6] A rare case of abdominal wall abscess has also been reported following polypectomy.[7]

But there is no description of parietal abscess developing from colonic perforation during diagnostic colonoscopy.

We have presented in this article a very rare case of parietal abscess on the left iliac region developed following diagnostic colonoscopy.

CASE REPORT

63-year male patient, a known diabetic & hypertensive on medications had undergone colonoscopy in the morning of 20th January, 2021 for irregular bowel habit. Patient developed acute pain on the left side of the abdomen in the evening on the same day and consulted the treating doctor immediately. The doctor could not detect anything significant and advised him symptomatic treatment. Nothing significant was detected.

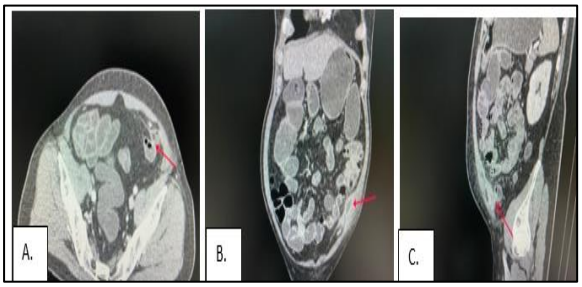

Figure 1: Parietal inflammatory lump with collection and air bubble (1A, 1B, 1C).

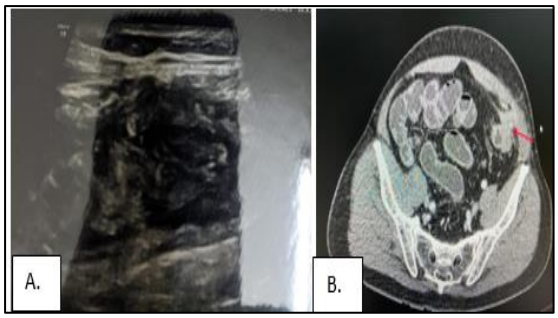

Figure 2: USG-near complete regression of collection (2A, 2B).

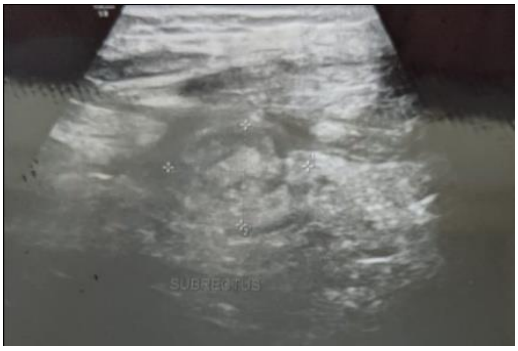

Figure 3: CT- abscess with colonic communication replaced with fibrosis.

The patient was advised symptomatic treatment but without any relief. Within a few days he discovered a gradually developing painful lump on the left iliac region associated with mild fever. Consultant physician advised him a double contrast CT scan of abdomen. Contrast CT scan revealed an inflammatory lump sized 7.4×2.3 cm with a localized heterogenous collection and few air bubbles in deeper part of left transverses abdominis muscle (Figure 1a,1b,1c) with communication to the sigmoid colon. On examination a tender lump over the left iliac region was felt with extension towards the pelvic region. There was no sign of general peritonitis and septicemia. He was admitted in the hospital for evaluation. Blood report showed TC count 11590/cumm, hemoglobin 10.3 gm%, random blood sugar 176 mg%, Creatinine 1.3 mg%, CRP 77.46 mg%. Other blood parameters were normal. Rest of the abdomen was also clinically normal (no tenderness, no muscle guard, no distension and normal peristaltic movement). U/S guided aspiration of the lump was done and pus was sent for c/s including AFB culture. Culture report showed growth of Enterobacteria and no AFB. Conservative treatment was started with intravenous fluid, piperacillin and tazobactam, intravenous metronidazole and other supportive treatment. No oral food was allowed except sips of water. About 25 cc of faecal smelling pus was aspirated under ultrasound guidance. Clear liquid was started after three days. Conservative treatment continued in consultation with gastro team. Ultrasound guided aspiration with wide bore needle was tried twice (Figure 2a, 2b) and minimal fluid was aspirated. Patient steadily responded to conservative treatment. There was gradual regression of the lump. Total WBC count and CRP came down to normal level after seven days. Semisolid was started when the response to liquid found to be satisfactory. Response to semisolid diet was also satisfactory. Patient was discharged after two weeks. Progress of weekly follow up was satisfactory. Clinical regression of the lump completed in six weeks replaced by an ill-defined parietal fibrotic area. Contrast CT (Figure 3) re-evaluation showed growth of fibrous tissue between colon and abdominal muscle.

DISCUSSION

Perforation and bleeding are two known serious complications of colonoscopy. The incidence of iatrogenic colonic perforation varies in different studies. De'Angelis et al reported 0.07% (diagnostic), 0.17% (therapeutic); Spanish study reported 0.09%, Nederland study showed 0.12%.[4] Colonoscopy perforation reported in the recent literature is 0.005-0.085% while incidence of bleeding is 0.001-0.687%.[1] Incidence of perforation remains the same for last 15 years unlike bleeding which has come down from 6.4 to 1.0/1000 colonoscopies.[8]

Sigmoid colon bears 50-60% of perforations during colonoscopy followed by caecum with 10-20%.[9,2] Rectosigmoid has been the most vulnerable segment for colonic perforation due to its sharp angulation.[10] 45-60% of these perforations are detected during colonoscopy.[4]

Factors responsible for colonoscopy perforation are direct colonoscopic trauma, tear of antimesenteric wall of the bowel loop, excessive insufflation, and electrocautery injury during therapeutic procedure.[4,11,12] Localised abscess may develop from the delayed perforation due to sumucosal damage during colonoscopy or from a sealed perforation.[4]

These perforations are classified as intra peritoneal, extra peritoneal or both combined.[2] Intra peritoneal type causes contamination of peritoneal cavity with colonic content and gas resulting in peritonitis and sepsis which may ultimately lead to cause haemodynaemic instability if not treated promptly. Extra peritoneal type is rare and causes leakage of colonic air and spread into the fascial plane to manifest as subcutaneous emphysema in the neck, thorax, flanks etc and also contaminate retro peritoneal space to form abscess in some cases. Double contrast CT scan has been the mainstay of the diagnosis and follows up.[4] High degree of suspicion is required for early detection to reduce the morbidity and mortality. Diagnosis was suspected from clinical presentation and confirmed by Contrast CT scan and laboratory investigations.

WSES 2017 guideline says that markers like WBC count, C-reactive protein indicates presence of sepsis (recommendation 1c). Procalcitonin is valuable in delayed cases of colonic perforation (recommendation 1C). 52% of the perforations are detected within one hour, 29% within 24 hours, 19% detected after 24 hours.[2]

De'Angelis et al after reviewing two large series summarized the symptoms of intra peritoneal perforation as pain abdomen in 74-95%, rebound tenderness in 82.5%, tachycardia in62.5%, leukocytosis in 40%, fever in 38%, abdominal distension in 6.6%. However according to WSES guideline of 2017, 5% was reported to be asymptomatic.

Subcutaneous emphysema is the predominant symptoms in 65% followed by pain abdomen in 34%, dyspnea in 25% reported in extraperitoneal type.[2]

The case in this article was presented with acute pain developed on the same afternoon after diagnostic colonoscopy and later on developed a localized tender swelling on the left iliac region with fever but without peritonitis. Contrast CT scan revealed a localized retro muscular collection with little air bubble suggesting colonic communication. A small colonic perforation was noticed on careful reading of CT scan. Total count and CRP were elevated. The case presented in this article has not been reported earlier in any studies in the literature (to my knowledge). Only one patient of parietal abscess has been reported in the literature that developed two weeks after colonoscopic polypectomy (Therapeutic colonoscopy).[7] There are reports of retroperitoneal abscess due to colonic perforation during colonoscopy.[5] Colonic fistula with parietal abscess commonly reported with underlying pathology like colon cancer, tuberculosis, Crohn's disease etc.[6]

Management ranges from conservative to surgical intervention depending upon the type of perforation, time of diagnosis, underlying pathology, bowel preparation and clinical presentations with hemodynamic status.[4] Thomson suggests five conditions for non-operative management: a small defect, retroperitoneal perforation, adequate pre-colonoscopic mechanical bowel preparation, good overall health, and the absence of generalized peritonitis.[13,14] Patient on non-operative treatment needs multispecialty follow up. Duration of follow up depends on the clinical assessment of the patient. Intervention requires when conservative treatment fails. Surgical treatment is indicated in generalized peritonitis, sepsis with hemodynamic instability, failed conservative or endoscopic treatment.[15] Overall success rate of conservative treatment 33-73%, 30 day mortality 0-25%, morbidity 21-53%.[10]

CONCLUSION

Colonoscopy perforation of colon, specially extraperitoneal perforation, is a rare but serious complication. Prompt diagnosis is important for timely treatment. High degree of suspicion is required for diagnosis. Double contrast CT scan is the vital investigation to diagnose the complication. Treatment ranges from conservative to surgical approach depending on the condition of the disease and the patient. Our patient was treated by conservative approach with successful outcome. Few cases of colo-rectal perforations with retroperitoneal or psoas abscess have been reported in the literature. There is report of one case of colonic perforation with parietal abscess following therapeutic colonoscopy. The case of colonic perforation with abdominal wall abscess following Diagnostic colonoscopy, that we have reported in this case report, has not been reported before, to our knowledge.

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