A 68 year-old woman presented with lower abdominal pain for three days and constipation for 10 days. The patient had a history of end-stage renal disease under regular hemodialysis, and coronary artery disease with antiplatelet drug. Physical examination was unremarkable except rebounding tenderness over lower abdomen. Blood tests showed bandemia 9% in white blood cell counts and elevated C-reactive protein (>250 mg/L, reference value, <3 mg/L). Abdominal radiography showed sign of retroperitoneal air - the presence of air outlining the psoas muscle (Figure 1, arrow) and one gas-contenting abscess (Figure 1, star) at left lower quadrant abdomen. Computed tomography (CT) of the abdomen revealed a large amount of fecaloma within sigmoid colon with wall thickening and pericolic fat stranding, and extravasation of stool material at left pelvic region (Figure 2, arrow), and pneumoretroperitoneum extending from the lower abdominal abscess. Under the impression of stercoral colitis associated sigmoid colon perforation, emergent exploratory laparotomy was performed. One 1.6*1 cm perforation of sigmoid colon with abscess formation was found. The pathologic report of colon resection specimen shows aggregates of hemosiderin-laden macrophages in colonic mucosa with focal transmural necrosis. The post-operation course was smooth, and the patient was discharge uneventfully twelve days later.

In our case, pneumoretroperitoneum is demonstrated by typical abdominal radiography – presence of air which outlines the psoas muscle (Figure 1), and further CT confirmed the presence of retroperitoneal air. In addition to some severe retroperitoneal infections or surgery, pneumoretroperitoneum is often resulted from the perforation of the retroperitoneal hollow organs, includes part of esophagus, most of duodenum, ascending and descending colon, the rectum and urinary tract. The cause of pneumoretroperitoneum in the present case is the perforation of stercoral colitis. Stercoral colitis is caused by increased intraluminal pressure from fecaloma on the walls of the sigmoid colon [1]. Perforation of colon can occasionally occur due to the progression of colonic ulcers resulted from prolonged localized pressure and compromised vessel supply, and its associated mortality could be up to 35% [2]. Although abdominal CT can help clinicians for the diagnosis of stercoral colitis and its associated complications, such as colon perforation or the formation of abscess, sometimes a simple radiography can provide useful information, such as our case.

References

Figure 1: Abdominal radiography showed sign of retroperitoneal air – the presence of air outlining the psoas muscle (arrow) and one gas-contenting abscess (star) at left lower quadrant abdomen.

Figure 2: Computed tomography of the abdomen revealed a large amount of fecaloma within sigmoid colon with wall thickening and pericolic fat stranding, and extravasation of stool material at left pelvic region (arrow).