

## Complicated diverticular disease: case report

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Recently, diverticular disease of colon, especially of its left half, has become one of the most acute issues of abdominal urgent surgery. Increased proportion of the elderly population and progressing incidence of diverticulosis as well as its severe complications due to perforation and diverticular abscess formation encourages focused attention to this problem especially given the fact that this condition is characterised by usually asymptomatic early stage that makes its diagnostics even more challenging.<sup>1-7</sup> This article covers a clinical case of complicated diverticular disease of sigmoid colon with perforated diverticulitis entering the right inguinal canal through dilated internal inguinal ring. The patient had a history of surgery, namely, bilateral herniotomy due to bilateral inguinal hernia. The final diagnosis was set upon diagnostic laparoscopy followed by conversion to laparotomy, herniotomy due to relapsing right-sided inguinal interstitial hernia with removal of diverticulum incarcerated and locked in hernial sac, and resection of sigmoid colon with formation of sigmoidostoma. Our findings indicate that in special cases when the inflamed diverticulum location is anatomically atypical, the only method of complicated diverticulitis diagnostics and treatment is laparotomy with abdominoscopy and removal of the infection source.

Recently, diverticular disease of colon, especially of its left half, has become one of the most acute issues of abdominal urgent surgery. Progressing incidence of diverticulosis as well as its severe complications due to perforation and diverticular abscess formation encourages focused attention to this problem. This article covers an interesting case of complicated diverticulitis of sigmoid colon with perforated diverticulitis entering the right inguinal canal through dilated internal inguinal ring.

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## CASE REPORT

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On October 14, 2018, a self-referred 73-years-old patient admitted the outpatient unit of the State Budgetary Healthcare Institution of the Arkhangelsk Oblast 'Severodvinsk Municipal Clinical Emergency Hospital No.2' with complaints on pain in the iliac region on the right 3 days after the disease onset.

Upon examination, the patient's state was satisfactory with heart rate of 75 bpm and stable haemodynamics. Vesicular breathing, no rales, respiratory rate of 16 bpm. Clear, wet tongue. Abdomen not bloated, involved in breathing, soft, tender in the iliac region on the right with positive peritoneal signs (Mendel signs, Voskresenskiy signs) with negative

Blumberg's sign. The patient has a history of surgery, namely, bilateral herniotomy due to bilateral inguinal hernia

The blood test showed the following parameters: leukocytes -  $10.1 \times 10^9/l$ , C-reactive protein – 183 mg/l.

CT of the abdominal cavity and retroperitoneal space [Figure 1]. Sigmoid colon in the iliac region on the right had signs of marked inflammatory changes such as unevenly thickened wall up to 6 mm, multiple gas bubbles parietally, infiltrated surrounded subcutaneous tissue (gas bubbles in it cannot be excluded).

Conclusion: Acute sigmoiditis, perforation is not excluded.

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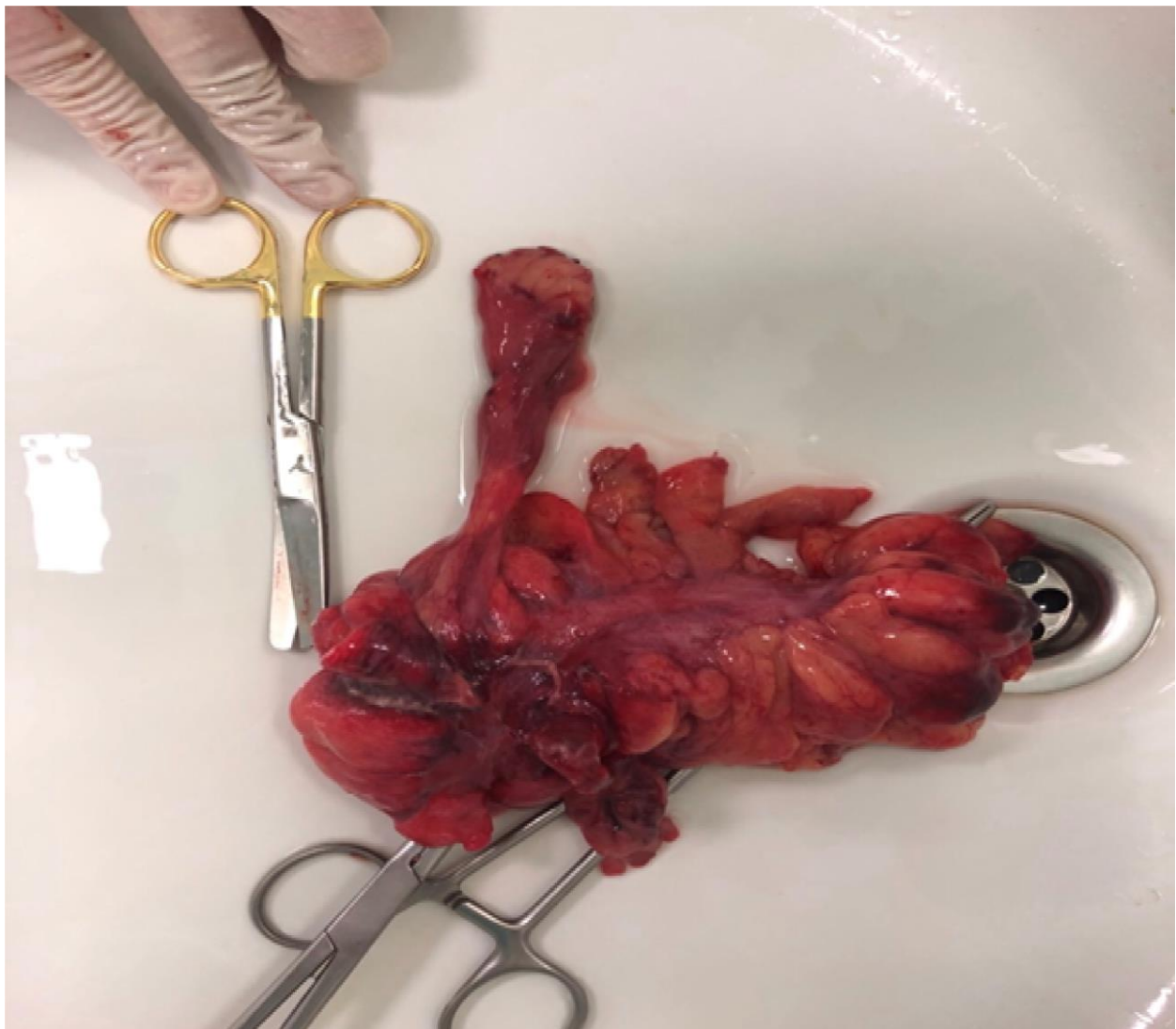
**Figure 1** Abdominal CT: sigmoid colon in the iliac region on the right



Diagnostic laparoscopy was carried out which the following findings: sigmoid colon elongated, located in the iliac region on the right, immobilised, fixed within this region with the area of necrosis on its wall. Conversion to midline laparotomy: sigmoid colon loop located in the iliac region on the right; a diverticulum branched from it entering the right inguinal canal through dilated internal inguinal ring along with the adjacent sigmoid colon wall with the signs of necrosis. Removing of diverticulum from the inguinal

canal was not feasible. Conversion to the right inguinal region was carried out, the hernia sac was isolated from adhesions in the initial part of the inguinal canal and opened. In the sac, a top of the diverticulum was found among adhesions fused with the inguinal sac walls. Adheolysis and herniotomy were carried out followed by plastic repair of the inguinal canal with local tissues. Then resection of the pathological part of sigmoid colon with diverticulum was performed through the abdominal cavity [Figure 2].

**Figure 2** Photo of the resected part of sigmoid colon with diverticulum



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## CONCLUSION

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Recently, diverticular disease of colon, especially of its left half, has become one of the most acute issues of abdominal urgent surgery. Increased proportion of the elderly population and progressing incidence of diverticulosis as well as its severe complications due to perforation and diverticular abscess formation encourages more focused attention to this problem. At present, a number of approaches to complicated diverticulitis diagnostics and treatment have become irrelevant and require reconsideration. Today, the leading role in diagnostics of diverticulitis complications

belongs to CT. The management is based on the imaging data and minimally invasive procedures, including laparoscopic and endoscopic surgeries are becoming increasingly popular. However, in special cases when the inflamed diverticulum location is anatomically atypical, the only method of complicated diverticulitis diagnostics and treatment is laparotomy with abdominoscopy and removal of the infection source as demonstrated by our findings.

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## INFORMED CONSENT

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Written informed consent was obtained from patients who participated in this study.

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