



Case report

Pneumoretroperitoneum, pneumomediastinum and subcutaneous emphysema after endoscopic submucosal dissection of a rectal lateral spreading tumor



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ABSTRACT

Introduction: Endoscopic submucosal dissection (ESD) is an already established procedure in the treatment of gastric and esophageal cancer in its early stages. Colorectal lesions, initially approached by endoscopic mucosal resection *en bloc* or in fragments, are the current focus for submucosal approach, especially for superficial lateral spreading tumor of 20 mm-diameter. The experience of Japanese centers, which are reference in therapeutic endoscopy, demonstrates reduction in the rate of disease recurrence with this approach and, according to specific histopathological criteria, may avoid colectomy in some cases of malignant neoplasia.^{1–3}

Case report: The patient was 50-year-old female. She underwent endoscopic submucosal dissection of a rectal lateral spreading tumor measuring 50 mm, located 8 cm from the anal margin. The procedure was performed without major complications, with just two points for muscle layer detachment, without gross perforation and closed with metal clips. However, the patient developed air leakage to the peritoneum, retroperitoneum, mediastinum and subcutaneous tissue, being only treated with clinical procedures and without additional intervention.

Conclusion: It is vital to know and be able to apply the technique of ESD, in addition to addressing its complications, since despite the numerous benefits compared to surgery, ESD can result in serious outcomes.^{4,5}

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Pneumorroperitônio, pneumomediastino e enfisema subcutâneo após dissecação endoscópica da submucosa de lesão retal de crescimento lateral

R E S U M O

Palavras-chave:

Lesão de crescimento lateral
Pneumorroperitônio
Pneumomediastino
Pneumoperitônio
Dissecação submucosa
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Introdução: A dissecação endoscópica da submucosa (ESD) já é procedimento consagrado no tratamento do câncer gástrico e esofágico em suas fases precoces. As lesões colorretais, inicialmente abordadas por mucossectomia, em bloco ou em fragmentos, são o foco atual para a abordagem submucosa, principalmente para os tumores de crescimento lateral superficial a partir de 20 mm de diâmetro. A experiência de centros japoneses, referências em endoscopia terapêutica, demonstram redução no índice de recidiva da doença com esta abordagem e, segundo critérios histopatológicos específicos, podem evitar uma colectomia em alguns casos de neoplasia maligna.¹⁻³

Relato de caso: Trata-se de paciente de 50 anos, submetida à dissecação endoscópica da submucosa de lesão de crescimento lateral, com 50 mm, localizada no reto, a 8 cm da margem anal. O procedimento foi realizado sem maiores intercorrências, com apenas dois pontos de afastamento da muscular, sem perfuração grosseira, fechados com clipe. Entretanto, a paciente evoluiu com escape aéreo para peritônio, retroperitônio, mediastino e subcutis, sendo tratada sem intervenção adicional, apenas com manejo clínico.

Conclusão: É de fundamental importância conhecer e saber aplicar a técnica da ESD, além de abordar suas complicações, uma vez que, mesmo repleta de benefícios em relação à cirurgia, ela pode apresentar desfechos graves.^{4,5}

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Introduction

Colonoscopy is widely used not only as a diagnostic procedure, but also with a therapeutic goal, being much prized by minimally invasive medicine.

ESD of early esophageal and gastric carcinomas is already practiced worldwide. The same technique applied to not-invasive pre-malignant and malignant colorectal lesions is not yet accepted as standard procedure. But this procedure is becoming increasingly feasible, to the extent that the technology extends the capabilities with tools appropriate to this procedure.¹⁻³ Thus, ESD allows the required professional training for a proper accomplishment of the method. Despite the prolonged surgical time and long learning curve, this method is superior to the piecemeal mucosal resection and has a lower rate of local recurrence and greater healing potential, besides allowing a histopathologic diagnosis for an accurate disease staging.^{4,5}

The perforations and bleeding are more common in this technique; but thus far the benefits conferred to the patient outweigh the risks. Moreover, the literature shows that conservative treatment of these complications has been possible in most cases.^{6,7}

Case report

A 50-year-old female patient was examined and who reported abdominal cramping pain in hypogastrium, diarrhea alternating with normal bowel habit and hematochezia for about a year. The terminal ileum colonoscopy showed a type-II high

granular flat lesion, located about 8 cm from the anal margin, measuring 50 mm in its greatest diameter. Our hospital did not have the needed equipment for colonoscopy imaging magnification.

The patient was healthy, with criteria for cure of breast adenocarcinoma treated with left mastectomy, ipsilateral axillary lymphadenectomy and adjuvant treatment with radiation and chemotherapy 18 years ago. She reported a family history of colorectal cancer in a first-degree relative (mother, age 70).

The patient was submitted to a colonoscopy with submucosal dissection of the lesion under general anesthesia. Submucosal infiltration with glycerol 12% stained with indigo carmine for submucosal expansion and for better visualization of planes and vessels was performed. During dissection, 0.1% carboxymethylcellulose was used, in order to keep for longer the submucosal expansion. The muscle layer detachment was identified at two points; there was no gross perforation, with the biggest one measuring about 8 mm. Both perforations were closed with metal clips, without subsequent interurrences (Fig. 1).

The patient remained hemodynamically stable, and was successfully extubated at the end of colonoscopy. When the procedure was over, an extensive subcutaneous emphysema throughout the right half of the body was noted, but without clinical consequence. The abdomen was flaccid and painless and the patient did not complain of dyspnea nor chest pain. An immediate workup was performed with chest radiography, which showed pneumomediastinum, besides the extensive subcutaneous emphysema. Still in the operative suite, the abdominal radiograph revealed retroperitoneum and pneumoperitoneum (Fig. 2).

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