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Mucocele complicating stapled hemorrhoidopexy

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ABSTRACT

INTRODUCTION: Stapled hemorrhoidopexy is a safe and effective treatment for circumferential hemorrhoidal prolapse. The overall rate of complications ranges from 12,7% to 36,4% and the surgeon should be aware about their early identification and adequate treatment.
PRESENTATION OF CASE: Female patient, 57 years was treated with stapled hemorrhoidopexy. Two years after surgery she reported to our center the occurrence of perineal discomfort, anal spasm and tenesmus. The anal exploration showed a bulge of the right lateral wall of the rectum at the level of stapled line without any related pain. 3D 360° transanal ultrasound showed a pararectal fluid collection. A surgical operation was performed and a great amount of mucus was drained. After one year the patient is completely asymptomatic with normal defecation.
DISCUSSION: Mucocele is a rare complication which usually occurs after months from the operation and it is considered a variant of rectal pocket and it is usually completely separated from the rectal lumen at the level of stapled line. The differential diagnosis between mucocele and pararectal lesions, especially abscess may be often difficult. Surgery is the treatment of choice with a transanal approach that is generally preferred to the *trans*-perineal.
CONCLUSION: Mucocele is a rare complication of stapled hemorrhoidopexy that may remain asymptomatic for a long period. In case of perineal discomfort after stapled procedure the physical examination combined with 3D 360° transanal ultrasound is necessary to reach the diagnosis. The knowledge of the possible rare complications is at the base of a correct treatment.

1. Introduction

Stapled hemorrhoidopexy is a safe and effective treatment for circumferential hemorrhoidal prolapse. It is associated with low postoperative pain, short hospital stay, fast return to work and high patients satisfaction. The broad spectrum of complications after stapled procedure has an overall rate that ranges from 12,7% to 36,4% [1]. Therefore, the surgeon should be aware about their early identification and adequate treatment. Mucocele, considered as a variant of rectal pocket, is fairly rare among the complications and it may determine problems of differential diagnosis and management with pararectal lesions, especially abscess.

2. Case report

Female patient, 57 years old came to our center for anal bleeding and hemorrhoidal prolapse and she was treated with stapled hemorrhoidopexy. The first year post-operative follow-up was normal. Eighteen months after surgery she started to have perineal discomfort and intermittent anal spasm and tenesmus. The patient underwent two consequent magnetic resonance in 4 months in other hospitals. The first one showed a pararectal lesion of 4 cm diameter while the second revealed the presence of a smaller mass than the first described so that the clinical decision was to wait and see. Six months after the patient reported to our centre the persistence of the symptoms which became fairly bothersome. At the inspection anus and perineal area were normal. The anal exploration showed a bulge of the right lateral wall of the rectum at the level of stapled line without any related pain. The patient underwent 3D 360° transanal ultrasound (t-US) which demonstrated a 6×3 cm right lateral pararectal fluid collection with an atypical stratification of its wall that results very similar to rectal duplication (Fig. 1). A surgical operation was performed after adequate counseling with the patient during which it was explained the problem of differential diagnosis among abscess, retroperitoneal pararectal lesion and a complication of the previous hemorrhoidopexy. After incision at the stapled line a great amount of mucus was drained, then a partial marsupialization with rectal mucosa eversion was performed. Discharge was on day two. After two months the follow-up endoscopy showed a normal stapled line with a right lateral diverticulum that has a width communication with rectal lumen.

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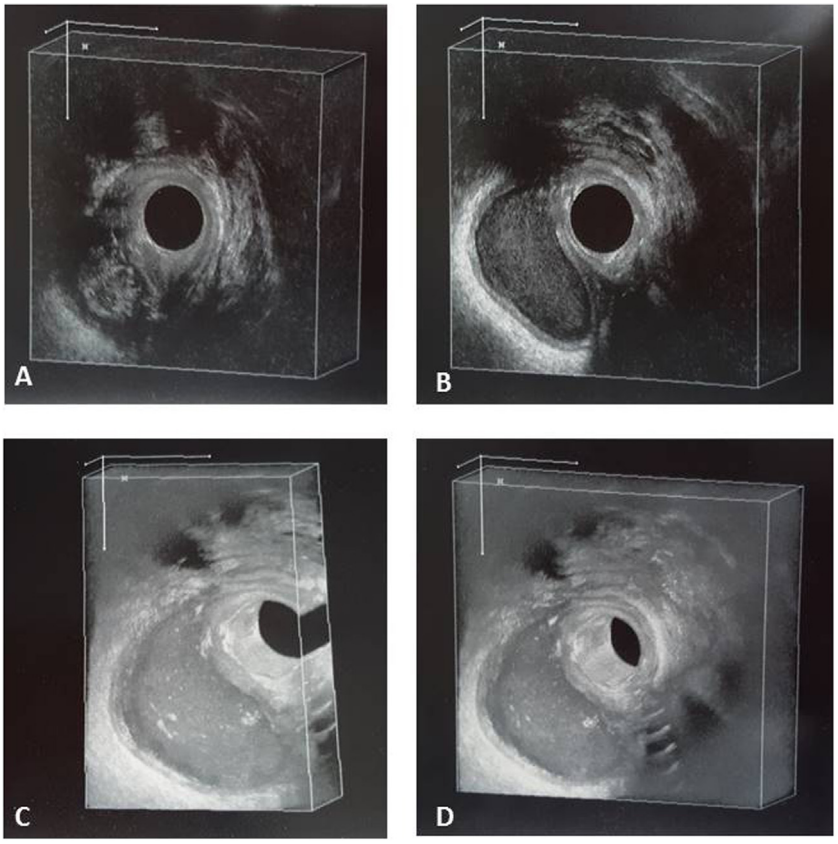

Fig. 1. 3D 360° transanal ultrasound. (A) Low rectum. (B) Superior anal canal at the staple line. It is evident the image of double track hypoechoic and hyperechoic around an hypoechoic fluid collection. (C-D) Rendering 3D images with airy spots more inside the fluid collection.

No further treatment were performed and after one year the patient is completely asymptomatic with normal defecation.

3. Discussion

Hemorrhoidal disease is one of the most common anorectal disorders with a reported prevalence in adults around 5% [2]. There are different types of surgical procedure to treat hemorrhoids according to the symptoms and anatomical presentation. In fact, nowadays there is an open debate about the right operation to perform focusing on a tailored treatment of hemorrhoids [3]. One of the most spread procedure for circumferential prolapse is stapled hemorrhoidopexy. It is based on circular resection of a rectal cylinder involving all the layers leading to the lift of hemorrhoidal tissue. It is reported an higher recurrence rate than the conventional hemorrhoidectomy [1] even if the patients usually refer an high grade of satisfaction. It is also characterized by low postoperative pain, shorter hospital stay and faster return to work [3].

With the introduction of the stapled procedure, the surgeons had to handle a new range of possible complications such as retroperitoneal hematoma or sepsis, anastomotic dehiscence, urgency, rectal pocket and mucocele. Conversely, bleeding, pain and stenosis are shared with other procedures [1]. The only way to reduce the incidence of postoperative complications is to select correctly the patients, to know the features of the device and to perform the surgical procedure in the right way following the tips and tricks suggested by the experts. Therefore, complications can still occur whereby coloproctologists should know them to easily identify and eventually treat them as soon as possible.

Mucocele is a rare complication which usually occurs after months from the operation and it is considered a variant of rectal pocket. It derives from a rectal plication during the fire of the stapler creating a pararectal cavity that is completely separated from the lumen at the level of stapled line. The main difference from rectal pocket is that this is a pseudodiverticulum which has a direct connection with rectal lumen and it is usually oligosymptomatic [4]. The wall of mucocele has the typical stratification of rectal layers and it contains dense mucus. Mucocele-related symptoms may sometimes be intermittent due to the possible partial drainage of the mucus inside the rectal lumen. At t-US the multiple layers of the wall can be easily identified, resulting an image of hypoechoic and hyperechoic double track around an hypoechoic fluid collection with sometimes hyperechoic airy spots. The frequent absence of any connection with the lumen leads to a progressive increase of dimensions until it becomes symptomatic with perineal discomfort. Sometimes the spontaneous partial mucus drainage inside the rectum correlates to a downsizing of the mass and a mild symptoms improvement. Bacterial colonization is a likelihood causing an abscess which may drain through the rectum or through the perineal region with a complex fistula whose healing may be challenging [5].

The differential diagnosis between mucocele and pararectal lesions may be often difficult. Pararectal lesions include tumors stemming from rectal wall such as gastrointestinal stromal tumor (GIST) or from retroperitoneum. The latter can be divided into three types based on the origin mesodermal, neuroectodermal and vestigial and they may be benign or malign [6,7]. They are usually asymptomatic for a long time and become symptomatic when the dimension has a compressive effect [8]. In case of suspicion of pararectal lesions t-US should be integrated with pelvic magnetic resonance to better identify the lesion and its relationship with the adjacent structures. However, the main difference is that mucocele has the aspect of fluid collection, very similar to an abscess

which represents the main problem of differential diagnosis, while retroperitoneal tumors are usually solid with sometimes little fluid necrotic areas [9]. Surgery is the treatment of choice for mucocele while rectal pocket may be treated in a conservative way. In fact, only the presence of a tiny communication with rectal lumen which does not allow an adequate drainage of the mucus requires surgery [4]. Transanal approach is generally preferred to the *trans*-perineal. Incision and drainage to create a wide connection between mucocele and rectal lumen is usually enough, but muosal eversion may be associated to reduce the recurrence. Diverticulectomy with direct rectal wall repair has been recently reported to treat rectal pocket[10] even if our more conservative surgery remains a feasible solution. In case of pararectal lesion a different approach could be used according to the position, dimension and oncological target. *trans*-abdominal resection which may involve the rectum too is generally indicated, but sometimes a combined approach is needed [8–11].

4. Conclusion

Mucocele is a rare complication of stapled hemorrhoidopexy that may remain asymptomatic for a long period with sometimes intermittent symptoms. In case of development and persistence of perineal discomfort after stapled procedure the physical examination combined with 3D 360° transanal ultrasound is necessary to reach the diagnosis. The knowledge of the possible rare complications is at the base of an adequate treatment reducing the time for a correct diagnosis.

Conflicts of interest

The authors declared that there are not conflicts of interest.

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Ethical approval

This is not a research study.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. The present paper has been reported in line with the SCARE criteria [12].

Author contribution

Asia Grapsi and Alessandro Sturiale contribute to the conception and to the drawing up of the case;

Alessandro Sturiale, Bernardina Fabiani and Gabriele Naldini contribute to the final revision and approval of the version to be published.

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