Case Report
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Endoscopic seroma treatment with glue

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Suárez Grau JM, Tallon L, Tinoco J, Padillo Ruiz FJ
Department of General and Digestive Surgery, Abdominal Wall Division, University Hospital Virgen del Rocío. Seville

Correspondence: Suárez Grau JM, Department of General and Digestive Surgery, Abdominal Wall Division, University Hospital Virgen del Rocío, Seville, Spain, Email graugrau@gmail.com

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Introduction

Postoperative seroma is a common complication that occurs in dead spaces left by surgical dissection. It is an accumulation of fluid from severed blood and lymphatic vessels, as well as inflammatory fluid, in these dead spaces, creating a collection. It is usually frequent after surgery for ventral hernia. In hernia surgery clinically significant seroma is reported in up to 17% of hernia repairs, studies have reported that the seroma detection rate approaches 90-100% when diagnosed based solely on radiological criteria.[1,2] This is clinically relevant as all seromas can lead to postoperative wound infection and potentially increase the rate of recurrence. In a few weeks this accumulation usually disappears and is no longer problematic. But sometimes the accumulation of fluid can increase in size and eventually develop a fibrous pseudocapsule, which can cause discomfort, deformity of the contour, compression of the surrounding structures and even become infected and an abscess.

Strategies to prevent the formation of seromas have been developed in recent years, with the typical use of suction drains, to improve section systems with ultrasonic or cutting dissection instead of traditional cauterization, uses of dynamic closure with sutures of progressive tension, ligation of vessels with clips or sutures, immobilization and use of a long binder in the postoperative period and more recently the use of sealants such as fibrin, talc or thrombin[2-5]. Despite these measures, seromas can still form. Although most seromas are successfully treated conservatively with serial aspiration, some patients require reoperation.

Case report

We describe the case of a 53-year-old male patient with diastasis of the rectum and umbilical hernia who underwent surgery 6 months ago using the SCOLA technique. The patient had a correct evolution, but the drains were removed early, with subsequent accumulation of fluid and maintenance of the postsurgical seroma. It was necessary to drain it during the month after surgery on four occasions (seroma type IVa in the Morales Conde Classification[2]). Persistent abdominal binder was recommended. There were no infectious complications that required another action on the seroma. But the patient had pressure discomfort and obvious contour deformity. After several revisions, a seromascopy with cleaning and cavity sealing evaluation was decided at six month a after the SCOLA surgery.

Surgery was performed with laparoscopic equipment, placing 10 mm and 5 mm trocars in the most caudal area of the seroma. The fluid was evacuated by aspiration and subsequent revision of the cavity under direct vision.

A large amount of slough and fibrin remains were not infected, but which prevented the correct sealing of the cavity. After exhaustive cleaning and removal of all debris material, sealing was performed with dispersed cyanoacrylate glue (Glubran, Cadiolink) to achieve a sealing of the seroma in its entirety. An abdominal binder was placed for a month in the postoperative period and its disappearance was evident (Figure 1 & 2).

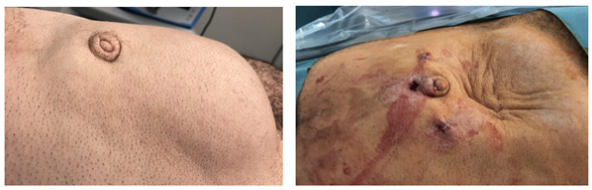

Figure 1 Seroma before and at the end of the intervencion.

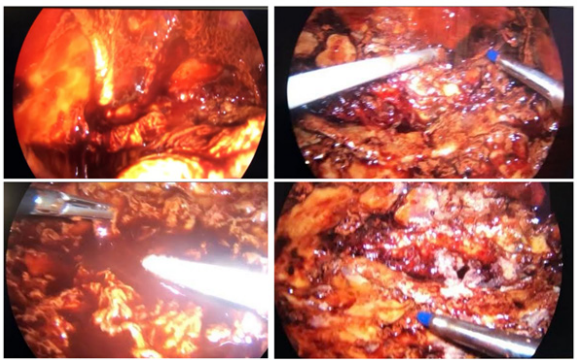

Figure 2 Seromascopy, 1: Interior of the seroma collection. 2: Aspiration of the fibrin and debris material. 3: Sealant with cianocrylate. 4: Cyanocrylate spray into the seroma cavity

Discussion

Two systematic reviews analyzing seroma prevention methods report that the use of fibrin sealants can improve the incidence of seromas. Massey et al.[3] found in the literature two studies using talc as a sealant (with contradictory results between the two articles) and two other studies using fibrin sealant with a clear decrease in seroma rates.[3,4] However, no conclusion could be drawn, since all the evidence is of low quality. Something similar occurs in the review by He et al.,[5] where they comment that currently primary fascial closure seems to be the most promising strategy available to reduce the formation of seromas and other promising strategies that reduce dead space, such as cauterization of the sac and fiber sealant injection will require more multicenter trials, but provide interesting results. Therefore the

line of the use of sealants in prevention is a way to go, but with still inconclusive long-term results.[5,6]

Regarding the treatment of established type IV seromas, there are multiple measures that can be carried out, from puncture and aspiration, to reoperation with pseudocapsule excision. In our case, we used cyanoacrylate type sealants because we needed greater tensile strength to prevent the seroma from filling early.[7] In other cases we have used fibrin sealants with less than optimal results. That is why we have started the treatment of these patients with synthetic sealants with higher adhesion. Sealant treatment is a line of work where more work and long-term results are necessary.[5–7]

Acknowledgments

None.

Conflicts of interest

The authors declare no conflicts of interest.

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