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PPH AND BIOLOGICAL GLUE IN PATIENTS WITH HIGH RISK OF BLEEDING IN STAPLED HEMORRHOIDOPEXY

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ABSTRACT - Background: Stapled hemorrhoidopexy is a common treatment for grade 3 hemorrhoids. Patients with conditions that increase the risk of bleeding, as cardiac stents usage with clopidogrel bisulfate and liver cirrhosis, should receive an extra care in surgical procedures due to the high risk of bleeding. For this reason and for patients with third degree hemorrhoids we propose the use of stapled hemorrhoidopexy followed by the use of biological glue. Aim: Assess surgical outcomes in patients with hemorrhoids and high risk of bleeding submitted to stapled hemorrhoidopexy followed by biological glue. Methods: Between 2005 and 2015, 22 patients were analyzed, in a retrospective cohort study. Results: From 22 patients submitted to stapled hemorrhoidopexy followed by the use of biological glue, only one (4.5%) presented bleeding in the surgical postoperative. Patients do not have any other complications and pain in the postoperative period. The median (IQR) operation duration was 55 (12) min and the median (IQR) length of hospital stay after surgery was 3 (2) days. Conclusion: Patients with high risk of bleeding submitted to stapled hemorrhoidopexy followed by the use of biological glue presented very low rates of bleeding in the postoperative period.

INTRODUCTION

Hemorrhoidal disease is a frequent involvement since more than 50% of the population over 50 years old has experienced symptoms. The most usual complications of hemorrhoids are heavy bleeding, chronic unremitting prolapse of mucosal tissue, strangulation, ulceration and thrombosis. A widely treatment of hemorrhoids is procedure for prolapse hemorrhoids (PPH) or stapled hemorrhoidopexy. One complication of this or other hemorrhoid treatments are postoperative hemorrhage. However, in patients with high risk of bleeding, as cirrhosis and cardiac patients with anticoagulation drugs, surgery can result in a larger hemorrhage complicating even more the patient condition. Therefore, to minimize hemorrhage in patients with high risk of bleeding submitted to surgery we propose the use of procedure for prolapse hemorrhoids together with biological glue.

The aim of this study was to realize an observational retrospective cohort to assess the complications after stapled hemorrhoidopexy and biological glue.

METHODS

Study overview

Data were analyzed retrospectively between 2005 and 2015, from private practice.
Postoperative bleeding

Of the 10 patients with hemorrhoids associated with hepatic cirrhosis none had bleeding during postoperative period. Of the 12 patients with hemorrhoid and stent, only one had bleeding during postoperative (Table 2). This patient presented bleeding (400 ml) during the first 24 h after surgery with no improvement after clinical treatment. This patient was submitted to a new surgery in the 3rd day of postoperative, in which she was sutured with two stitches (Polydiodanone 3-0) in the stapled suture line with bleeding resolution (Table 3). Of the 22 patients only one presented bleeding in the postoperative period. Beyond this patient with bleeding there was no other complication reported in our cohort.

<table>
<thead>
<tr>
<th>TABLE 2 – Percentage of patients with bleeding after surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bleeding</td>
</tr>
<tr>
<td>Cirrhosis (%)</td>
</tr>
<tr>
<td>Stent (%)</td>
</tr>
<tr>
<td>Total (%)</td>
</tr>
</tbody>
</table>

TABLE 3 – Bleeding patient information

<table>
<thead>
<tr>
<th>Blood loss</th>
<th>Gender</th>
<th>Age</th>
<th>Management</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 ml</td>
<td>F</td>
<td>78</td>
<td>Reoperation- Two stitches in stapled suture line</td>
<td>bleeding resolution</td>
</tr>
</tbody>
</table>

Pain and operation duration and hospital stay

All patient reported pain lower than 3 in a scale ranging from 0 to 10. The median (IQR) time of operation duration was 55 (12) min and patients stayed in hospital for a median (IQR) period of three (2) days after surgery.

DISCUSSION

Our results suggest that in patients with third degree hemorrhoids and liver cirrhosis or use of stent and Clopidogrel submitted to stapled hemorrhoidopexy followed by the use of biological glue has great results. Of the total cohort only one (4.5%) patient presented bleeding during the postoperative period. This represents a small percentage of the total sample.

Searching in the literature was found two papers similar to our goal. The first one was a study from Anghelacopoulos et al. They did a randomized controlled trial comparing the use of PPH in one group and PPH and biological glue in the other. Their sample included patients with hemorrhoids grade 3 and 4, but without any condition that increase the risk of bleeding.
Despite the samples being a little different, our study shows encouraging results that resemble the results of Anghelacopoulos et al. Their study showed great results for a broad population while this one presents great results for a narrow population.

Only with the use of PPH 25% of the sample presented bleeding after the procedure as reported by Huang et al. In our study with the use of PPH followed by biological glue 4.5% of our sample presented bleeding in the postoperative. Comparing only patients with cirrhosis our results presents 0% of postoperative bleeding against 25% in Huang et al. That suggests that biological glue associated with PPH might decrease postoperative bleeding in cirrhotic patients.

Based on our results, we propose that patients with third degree hemorrhoids with a secondary condition that increases the risk of bleeding should be submitted to stapled hemorrhoidopexy with the use of biological glue to reduce bleeding during the postoperative.

The association of third degree hemorrhoids and liver cirrhosis or stent use is not so frequent. For this reason, the major limitation of our paper is the reduced sample size. To achieve more solid and generalizable results one solution is the conduction of a multicenter prospective study to increase sample size. A prospective study could also help balancing the...
covariates between groups reducing confounders, that were not assessed in this study. But in surgical areas randomized controlled trial may face challenges as lack of infrastructure, surgeon learning curve and differences in development and research\(^7\). One factor that may have influenced our results were the great expertise of the surgeon.

**CONCLUSION**

Patients with high risk of bleeding submitted to stapled hemorrhoidopexy followed by the use of biological glue presented very low rates of bleeding in the postoperative period.

**REFERENCES**