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Letter to the Editor

Distal Hemorrhoidectomy With ALTA Injection: A New Method for Hemorrhoid Surgery

Aluminum potassium sulfate and tannic acid injection (ALTA) is a useful and less-invasive treatment for internal hemorrhoids. However, it is not a treatment option for external hemorrhoidal diseases, including mixed hemorrhoids. Distal hemorrhoidectomy with ALTA injection involves surgical resection of external piles, followed by injection therapy on internal piles. We report technical details and the short-term results of this procedure in patients with mixed hemorrhoids. Seventy-two patients with mixed hemorrhoids treated between 2010 and 2011 were included. The main outcome measures were the short-term response and complication rates. At 28 days after surgery, the disappearance rate of prolapse was 100%. Three patients (4%) had postoperative complications, all minor in nature. No prolapse recurrence was observed within a median follow-up period of 6 months. Distal hemorrhoidectomy with ALTA injection appears to be a promising treatment option for patients with mixed hemorrhoids.

Key words: Hemorrhoidectomy – Sclerotherapy – Aluminum potassium sulfate and tannic acid

Hemorrhoids are a very common anorectal condition, defined as the symptomatic enlargement and distal displacement of normal anal cushions. The most common symptom of hemorrhoids is anal bleeding and prolapse.[1]

Hemorrhoidectomy is the most effective treatment for prolapsed hemorrhoids and is associated with the lowest recurrence rate. However, hemorrhoidectomy is not without complications, which include postoperative pain, urinary retention, secondary hemorrhage, formation of skin tags, anal stenosis, and fecal incontinence.[2]

Aluminum potassium sulfate and tannic acid (ALTA) is an injectable sclerosant for treating hemorrhoids. In a comparative study of ALTA injection and hemorrhoidectomy for prolapsed hemorrhoid cases, ALTA injection produced almost the same effects as hemorrhoidectomy, without the specific complications.[3,4] However, ALTA injection is effective only for internal hemorrhoids. In the case of mixed hemorrhoids with predominant external hemorrhoids or thrombosed hemorrhoids, application of ALTA is not appropriate.[3,5]

Distal hemorrhoidectomy with ALTA injection (DHA) is another option for the management of mixed hemorrhoids. The procedure involves surgical resection of the external piles, followed by ALTA injection on the remaining internal piles. This study aimed to describe the technical details and evaluate the short-term response and complication rates in

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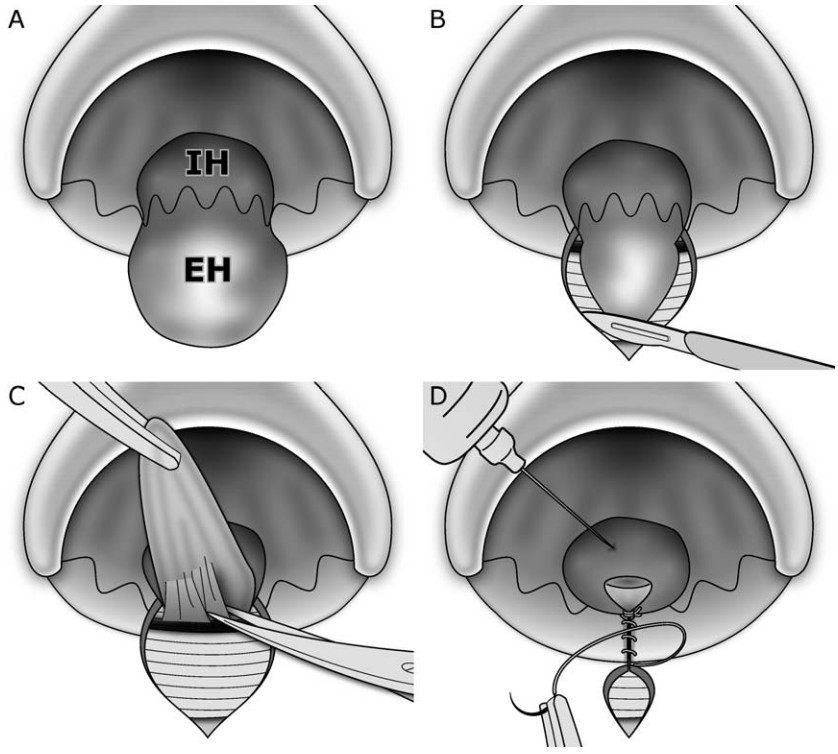

Fig. 1 Distal hemorrhoidectomy with ALTA injection. Mixed hemorrhoid with predominant external hemorrhoid (A). A fusiform excision made in the anal skin overlying the external pile (B). The entire external pile is sharply excised with scissors. Cutting into the muscle sphincter below the hemorrhoidal vessels should be avoided (C). After dissection of the external pile to its pedicle, 2-0 Vicryl is used to ligate the pile, which is excised at the dentate line. The wound is semiclosed with a running stitch. Then, ALTA injection is administered on the remaining internal hemorrhoid (D). IH, internal hemorrhoid; EH, external hemorrhoid.

patients with mixed hemorrhoids treated with this combined approach.

Patients and Methods

We retrospectively reviewed the results of DHA performed between April 2010 and April 2011 at our institution. The research and ethics committee of Kunimoto Hospital approved this study, and all patients provided written informed consent before participation. The following inclusion criteria were applied: failure of nonoperative management, second- to fourth-grade hemorrhoids according to Goligher's classification, with mixed hemorrhoids including at least 1 large external hemorrhoid or hemorrhoids in an acute stage, such as thrombosed external hemorrhoids and strangulated hemorrhoids.

DHA was performed under caudal epidural anesthesia, in the prone jackknife position, with the buttocks taped widely apart. A suppository rather than an enema was used to empty the rectum before surgery. An anoscope was inserted for inspection of the anal canal (Fig. 1A). A fusiform incision was placed into the anal skin overlying the external pile (Fig. 1B). The entire external pile was sharply excised with scissors. We were careful to avoid cutting into the muscle sphincter below the hemorrhoidal vessels (Fig. 1C). After dissection of the external pile to its pedicle, 2-0 Vicryl (Ethicon, New Jersey, USA) was used to ligate the pile, which was excised at the dentate line. A running stitch using 3-0 Monocryl (Ethicon, New Jersey, USA) was used to semiclose the wound (Fig. 1D).

Next, ALTA injection was administered to the remaining internal piles. The surgeon inserted a Z-type proctoscope (Arakawa Seisakujo, Tokyo, Japan) with a distally opening window. ALTA solution (Zione; Mitsubishi Tanabe Pharma Co, Osaka, Japan) was injected through a 25-gauge injection needle mounted on a 5-mL syringe according to a 4-step injection procedure as described previously.[3,4] Briefly, ALTA was injected into 4 parts of the pile: submucosa at the superior pole of the pile, submucosa in the central part of the pile, mucous lamina propria in the center of the pile, and submucosa at the inferior pole of the pile. The last part of the ALTA procedure was omitted for mixed hemorrhoids because these would be resected by distal hemorrhoidectomy. ALTA injection was administered to other hemorrhoids composed of internal hemorrhoids only.

All patients were followed up on an outpatient basis. The efficacy of DHA was evaluated as the

disappearance rate of prolapse, rate of postoperative pain, and rate of constipation at 28 days after surgery.

Results

From April 2010 to April 2011, we performed DHA on 72 patients (38 men, 34 women; median age, 54 years; range, 27–82 years). Overall, 8 patients had grade II hemorrhoids, 59 had grade III hemorrhoids, and 5 had grade IV hemorrhoids. DHA was performed for 1 hemorrhoid in 55 patients, 2 hemorrhoids in 16 patients, and 3 hemorrhoids in 1 patient.

The median surgical duration was 20 minutes (range, 10–40 minutes). The mean total injection dose of ALTA was 16 mL (range, 6–25 mL). Postoperative complications included hemorrhage in 1 patient (1.4%), pyrexia in 1 (1.4%), and rectal ulcer in 1 (1.4%), respectively. Hemorrhages occurred at the distal hemorrhoidectomy site after 3 operative days and required stitching of the bleeding area. Pyrexia promptly resolved with no particular treatment. Rectal ulcers developed at the site of the ALTA injections a month after surgery, but they healed completely within a month of treatment with hemorrhoidal suppositories.

At 28 days after DHA, the disappearance rate of prolapse was 100%. Although spontaneous pain was not noted, pain during defecation and constipation were observed in 2 patients each (2.8%). No prolapse recurrence after DHA was observed during the median follow-up period of 6 months (range, 1–36 months).

Discussion

Our data showed that DHA is safe and effective, proving the combined effects of the safety of ALTA and curability of hemorrhoidectomy, for the management of mixed hemorrhoids.

Ligation and excision (LE) is the prevailing hemorrhoidectomy method whereby external and internal piles are selectively resected in a mass. It is important to avoid excessive excision of the anal epithelial layer or mucous membranes because excessive excision may lead to complications such as postoperative pain, hemorrhage, prolonged healing, and anal stricture.[2,6]

Unlike LE, ALTA injection requires neither dissection of submucosa nor excision of any anoderm. It can be performed in a short time, and there is very low risk of postoperative pain and complications.[4,5] However, according to a study on recurrence after ALTA injection, the most frequent recurrence pattern was external pile recurrence[7]; therefore, it cannot be used for treating external hemorrhoidal diseases, including mixed hemorrhoids or thrombosed external hemorrhoids. Furthermore, concomitant anal diseases such as skin tags and anal polyps are contraindications for treatment with ALTA injection. In contrast, LE has been the treatment of choice for various types of hemorrhoids.[8] Therefore, DHA ensures applicability by distal hemorrhoidectomy; furthermore, the procedure is designed such that it minimizes complications.

The strengths of DHA compared with those of LE are as follows. First, almost the entire anoderm can be preserved by administering ALTA injection instead of performing LE. Second, the extent of excision in distal hemorrhoidectomy is less than that in LE; as a result, alleviation of postoperative pain and prevention of hemorrhage from the edge of the wound can be expected. Postoperative secondary hemorrhage rarely arises from the vascular pedicle because the sites of ligation and excision are more distal than those in LE and because ALTA injection causes a sclerosing effect on the internal piles.

Significant complications of ALTA injection are rare, but misplacement of the injection may result in mucosal ulceration or necrosis, pyrexia, and prostatitis.[3,9]

In conclusion, DHA was quick and easy to perform with a good short-term outcome, and it was associated with a low rate of complications. Therefore, it seems to be a reasonable alternative for patients with mixed hemorrhoids.

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