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**File: ■ Aloe (*Aloe vera*)
■ Hemorrhoid Surgery
■ Postoperative Pain**

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RE: Aloe Cream for Posthemorrhoidectomy Pain and Wound Healing Found Effective

Eshghi F, Hosseinimehr SJ, Rahmani N, Khademloo M, Norozi MS, Hojati O. Effects of *Aloe vera* cream on posthemorrhoidectomy pain and wound healing: Results of a randomized, blind, placebo-controlled study. *J Altern Complement Med.* 2010;16(6):647-650.

A hemorrhoidectomy (surgical procedure to remove hemorrhoids) causes significant postoperative pain. The pain is caused by numerous things including wound healing and inflammation. *Aloe (Aloe vera)* has antioxidant, wound healing, antibacterial, antifungal, and immunomodulating effects. Healing burn wounds is one of the main uses for aloe. Hence, the authors evaluated the effect of aloe on reducing postoperative pain and pain on defecation after open hemorrhoidectomy.

Forty-nine patients with symptomatic III and IV degree hemorrhoidal disease and undergoing open hemorrhoidectomy surgery participated in this randomized, double-blind, prospective, placebo-controlled study. The study was conducted at Imam Hospital, Sari, Iran. Patients who were pregnant or had anal fissure, heart disease, or liver disease were excluded. Patients were randomized to receive placebo or aloe cream, specially compounded for the study. Liquid white paraffin, sterile alcohol, cetyl alcohol, solid white paraffin, and propylene paraben were mixed and heated to boiling, as the oil phase. *Aloe vera* gel powder 0.5% (Zarband Phytopharmaceutical Company; Iran) mixed with deionized water was added to a mixture of propylene glycol, sodium lauryl sulfate, and methylparaben, and heated as the aqueous phase. The 2 separate phases were mixed continuously while being cooled. The resulting cream was packaged into an aluminum tube for the study. The placebo cream was made the same way, but the aloe was left out of the mix. The first application of the cream was immediately after surgery and was part of the postoperative dressing. Cream was reapplied 12 hours later. The patient then applied approximately 3 g of the cream to the surgical site 3 times/day for up to 28 days. Patients could take analgesic drugs as needed, and the analgesic requirement was recorded. Postoperative pain was recorded with a visual analog scale. At 2 and 4 weeks postoperation, an expert surgeon evaluated wound healing.

There were no significant differences between groups at baseline. Pain scores immediately following surgery were not significantly different between groups. The aloe group had significantly less pain than the placebo group at 12, 24, and 48 hours and 2 weeks postsurgery ($P < 0.001$). The aloe group also had significantly less pain on defecation 24 and 48 hours after hemorrhoidectomy ($P < 0.001$), but there was no significant difference between groups at 2 and 4 weeks. At 2 weeks postsurgery, the aloe group had significantly better wound healing ($P < 0.001$), but there was no significant difference between groups at 4 weeks. Narcotic use was significantly less in the aloe group than in the placebo group 12 hours postsurgery ($P < 0.001$), and non-narcotic use was significantly less in the aloe group than in the placebo group 2 weeks postsurgery ($P < 0.001$). No adverse side effects or allergic reactions were reported.

The authors conclude that *Aloe vera* cream provided significant pain relief after open hemorrhoidectomy. Also, aloe cream produced significant wound healing 14 days postsurgery. The authors point out that the use of fewer analgesics by the aloe treated patients confirms the findings. Aloe may be producing these effects through a variety of mechanisms. Aloe may decrease inflammation, which is the first step to wound healing; it may also be enhancing collagen production: collagen provides strength and integrity to the skin and supporting tissues.

The findings of this study are particularly credible since the study was not sponsored by a company and does not promote a specific product. Aloe vera 0.5% products are available commercially, which enables the findings from this study to be easily put into clinical practice.

—Heather S. Oliff, PhD

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