



# How I do it: Submucosal hemorrhoidectomy with advanced bipolar technology-modified Parks' method

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## ABSTRACT

Park's method of submucosal hemorrhoidectomy has not gained widespread clinical use despite its minimally invasive nature. However, combining this technique with modern bipolar technology LigaSure™ offers a promising approach to surgical treatment of hemorrhoidal disease.

A patient with stage III hemorrhoidal disease underwent surgery under subarachnoid anesthesia in the Lloyd Davis position. The procedure involved lifting external hemorrhoids with an Allis clamp to expose internal hemorrhoids. Using monopolar coagulation, a linear incision was made in the distal skin covering left lateral external hemorrhoids. The surgeon carefully separated varicose veins from sphincter fibers. The LigaSure™ device was then used to dissect hemorrhoidal tissue in the submucosal layer toward the hemorrhoidal artery origin. The artery was ligated 1 cm above the dentate line using bipolar technology while preserving the mucosa.

Similar techniques were applied to remove right posterior and anterior hemorrhoidal tissue. The result showed three small incisions on the anoderm with complete preservation of the anal canal mucosa.

The modified technique allows excision of hemorrhoidal tissue and ligation of arteries without sutures, preserving the lining of the anal canal. This approach potentially results in shorter hospital stays, less postoperative pain, and promotes rapid recovery.

**Keywords:** Minimal invasive surgery, proctology, rectum

## INTRODUCTION

Submucosal hemorrhoidectomy - Park's method has not found wide application in clinical practice, even though it is less invasive (1). However, combining the technique with modern bipolar technology LigaSure™ provides a new perspective on this procedure when choosing surgical treatment for hemorrhoidal disease (2).

## CASE REPORT

Patient with hemorrhoidal disease III stage. After subarachnoid (spinal) anesthesia, the patient was placed in a Lloyd Davis position.

An Allis clamp was used to lift the external hemorrhoids to expose the internal hemorrhoids. Using monopolar coagulation, a linear incision was made in the distal part of the skin covering the left lateral external haemorrhoids.

Using monopolar coagulation, the surgeon carefully separated the varicose veins from the sphincter fibres. The LigaSure™ device was then used to dissect the hemorrhoidal tissue in the submucosal layer towards the origin of the hemorrhoidal artery. Finally, the artery was ligated 1 cm above the dentate line using state-of-the-art bipolar technology while preserving the mucosa.

The surgeon removed the right posterior, and right anterior hemorrhoidal tissue in a similar fashion.

The result is shown as three small incisions on the anoderm with full preservation of the anal canal mucosa.

For a more detailed view of all stages of the operation, please refer to the Video 1.

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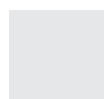
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## CONCLUSION

A modified technique allows excision of hemorrhoidal tissue and ligation of the hemorrhoidal artery without sutures, preserving the anal canal mucosa. This approach may result in a shorter hospital stay, less postoperative pain, and fewer complications associated with surgery. The patient was discharged the day after surgery. According to the visual analogue scale, pain is noted at a level of 2 points. Complete healing of the postoperative wound took 14 days.



**Video 1.** <https://youtu.be/2xvNCYSc1D8>

## Ethics

**Informed Consent:** Informed consent was obtained from the patient.

## Footnotes

### Author Contributions

Concept - S.K.E.; Design - S.K.E.; Data Collection or Processing - S.K.E., A.A.O.; Analysis or Interpretation - S.K.E., A.A.O., A.Y.K.; Literature Search - S.K.E., A.A.O., A.Y.K.; Writing - S.K.E., A.A.O., A.Y.K.

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