Hemorrhoidal Arterial Ligation: The Experience of a Single Institution

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Introduction

- Hemorrhoids refer to the anal cushions—comprised of blood vessels, connective and elastic tissue, and smooth muscle—located classically in the left lateral, right anterior, and right posterior positions within the submucosal space of the anal canal, proximal to the dentate line.
- The standard options to manage hemorrhoidal disease have long included office-based procedures as well as surgical excisional hemorrhoidectomy which could be excisional or stapled (procedure for prolapsed hemorrhoids).
- Hemorrhoidal arterial ligation is a novel method involves the suture ligation of the terminal branches of the superior rectal arteries as identified via an anoscope equipped with a Doppler device. To improve the high incidence of recurrent hemorrhoidal prolapse, the technique was further modified in 2006 to include the suture transfixion of the enlarged hemorrhoidal cushions within the anal canal, known as mucopexy or rectoanal repair.

Purpose

To review the short-term recurrence rates and complications of hemorrhoidal arterial ligation (HTS) with mucopexy.

Methods

- IRB approval was obtained for a retrospective chart review of all patients who underwent HTS between January 2007 and June 2009.
- The preoperative and postoperative symptoms, operative details, and postoperative follow up were recorded.
- A treatment failure was reported if residual internal hemorrhoids were noted on follow up examination or if the pretreatment symptoms persisted. All recurrences were further assessed for possible predictive factors.

Complications and recurrences after hemorrhoidal arterial ligation (HTS) with mucopexy

	Number of patients (%)	Result
Complications		
Bleeding	2(2%)	Resolved
Pain	2(2%)	Resolved
Urinary retention	2(2%)	Conservative management
Recurrence		
Residual hemorrhoids on examination	20(21%)	
Symptomatic recurrence	13(13.5%)	Resolved with: Banding = 6 HTS = 5 Hemorrhoidectomy = 2

Results

- The procedures were performed by 4 surgeons, with 2 surgeons performing 66% of the procedures. 96 patients, 39 of whom were male, were included.
- The average age was 63.5 years (range 21-81 years). The median length of follow up was 15 months (3-34 months).
  Preoperatively, all patients related rectal bleeding. Additional preoperative symptoms involved prolapse (n = 38), pain (n = 21), itching (n= 7), anemia (n =1), and thrombosis (n= 1). The duration of symptoms varied from 1 week to "many years," with 50% of the patients claiming to have symptoms for more than 5 years.
- 26 patients had previous treatment for rectal bleeding: banding (15), PPH (3), and excision (4); 4 patients had multiple prior procedures. 20 patients had a concomitant anal procedure at the time of the HTS, with the most common being skin tag excision.

Complications and recurrence (See table).
50% of the recurrences (10/20) and, in particular, 70% (9/13) of the recurrences necessitating treatment occurred during the first 20 procedures of each of the surgeons. 13 of the recurrences developed in the 20 patients noted to have internal hemorrhoids that were described as large and circumferential in the operative note.

Conclusions

HTS is a simple procedure with a low complication rate. Recurrences, especially symptomatic recurrences, occur more frequently during the learning curve of the surgeon. Patients with large circumferential internal hemorrhoids should be counseled about a possible higher rate of recurrences. HTS can be safely and effectively repeated for such recurrences.