

## Outcomes of Hemorrhoidal Artery Embolization from a Multidisciplinary Outpatient Interventional Center

**Clinical Paper Review**  
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### Purpose

To evaluate the safety and efficacy of outpatient transarterial embolization for symptomatic refractory internal hemorrhoids

### Methods

- Retrospective, single-center study, N=134 participants treated with hemorrhoidal artery embolization (HAE)
- Branches of the superior rectal artery or middle rectal artery supplying the corpus cavernosum recti were embolized with both spherical particles and microcoils
- Clinical success = improvement of symptoms without additional treatment
- Assessments:
  - Hemorrhoid-related pain (HRP) (score range: 0-10)
  - Hemorrhoid symptoms score (HSS) (score range: 5-20)
  - Quality of life (QoL) (score range: 0-4)
  - French bleeding score (FBS) (score range: 0- 9)
  - Goligher hemorrhoid grade (score range: 0-4)
- Baseline and 1-month outcomes for HRP, HSS, QoL, FBS, and hemorrhoid grade were compared using a paired 2-tailed *t* test

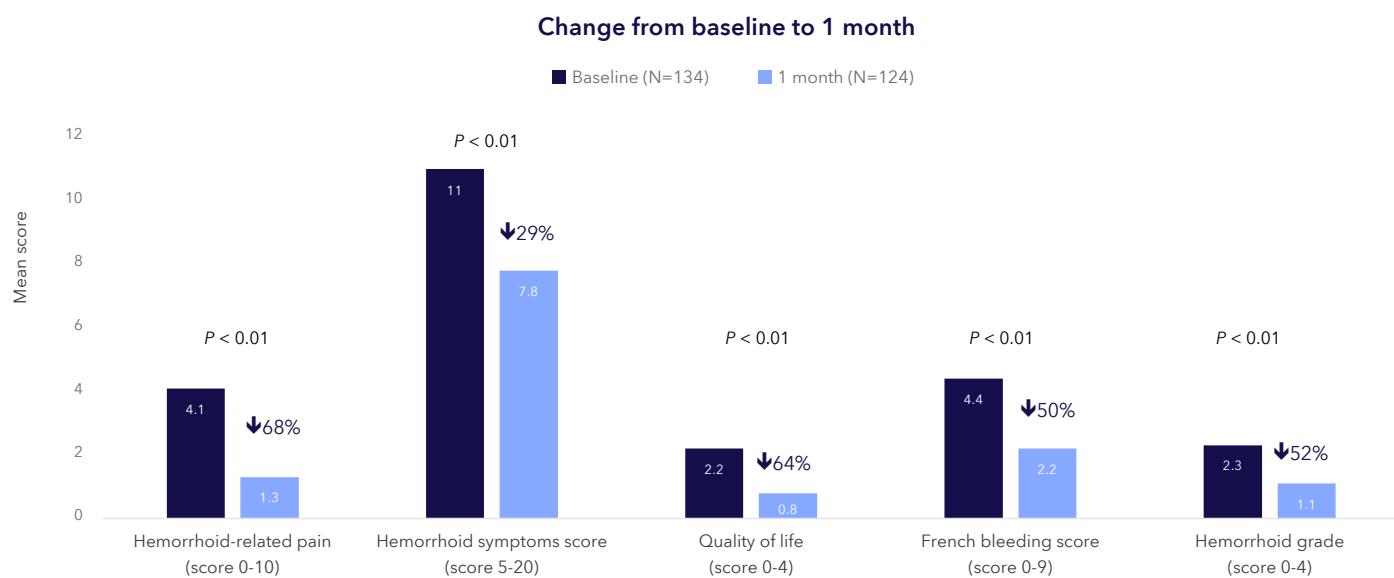
## Results

### Baseline characteristics

Patient characteristics	Patients (N=134)
Age (years), mean $\pm$ SD	54.9 $\pm$ 14.5
Sex, n	
Male	76
Female	58
BMI, n (%)	
<25 kg/m <sup>2</sup>	54 (40.3)
>25 kg/m <sup>2</sup>	80 (59.7)
Symptoms, n (%)	
< 5 years	40 (30.0)
5-10 years	34 (25.3)
10-20 years	35 (25.4)
>20 years	25 (18.7)
Prior treatments, n (%)	
Sitz bath and softener	89 (66.4)
Rubber band ligation	66 (49.3)
Hemorrhoidectomy	10 (7.4)
Infrared photocoagulation	5 (3.7)

## Outcomes

- Significant improvements in mean score were reported on all five outcome assessments at 1 month after HAE



## Outcomes (continued)

- Clinical success was achieved in 93% of patients at the 1-month follow-up
- 9 patients required repeat embolization
- No severe adverse events (AEs) were reported, one grade 1 mild AE was reported (severe perianal pain the day after HAE that resolved with a topical anesthetic agent) and one grade 2 moderate AE was reported (flow-limiting short-segment dissection that occurred during attempted inferior mesenteric artery catheterization)

## Discussion

- HAE using a combination of spherical particles and microcoils resulted in symptom improvement in this large, single-center, retrospective study
- In previous studies, HAE was performed inpatient in elderly patients with contraindications for more invasive treatments and procedures were guided by cone-beam computed tomography
- This study included adults of all ages treated with HAE using 2-dimensional angiography on a mobile angiography system in an outpatient setting with discharge 2 hours after treatment

## Limitations

- The retrospective study design is prone to selection bias and may result in underreporting of complications and a more heterogeneous study population
- With no comparison arm, a placebo effect of HAE cannot be ruled out
- Although the follow-up period was short, multiple prior studies have shown that outcomes 1 month after HAE persist through midterm follow-up

## Authors' Conclusion

HAE was a safe and effective outpatient procedure in the short term for patients with symptomatic hemorrhoids refractory to conservative management.

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Not provided