Robot-Assisted Transanal Minimally Invasive Surgery: A Case Series

Karina W Lo, MD, David N Blitzer, MD, Sami Shoucair, MD, David M Lisle, MD
Department of Surgery, MedStar Health Baltimore, Baltimore, MD

Objectives

To describe the early experience with Robot-assisted Transanal Minimally Invasive Surgery (TAMIS) at a single institution

Introduction

- TAMIS is becoming a popular minimally invasive technique for local excision of well-selected rectal lesions.
- Robot-assisted surgery can improve the ergonomics of conventional laparoscopic techniques.
- Robot-assisted TAMIS has been proposed as another option for colorectal surgeons

Methods

- Retrospective chart review of patients with rectal lesions who underwent robot-assisted TAMIS
- Data points collected included patient demographics, final pathology, surgical and admission details, clinical outcomes
- Successful procedures were defined as having negative margins on final pathology

Results

Total # Cases: 12
Mean age = 68.1 years
Location
- 50% in middle rectum
- 50% in distal rectum

Final Pathologies

- No evidence of tumor, n= 2
- Adenoma, n= 4
- Adenoma with high grade dysplasia, n= 3
- Invasive rectal adenocarcinoma T1, n = 3

Mean size: 2.89cm (IQR 2-4.1cm)
Negative margins achieved in 100% of cases

Complications

- No complications (n= 10)
- Incontinence, self limiting (n= 1)
- Rectal wall abscess (n= 1)

All patients were able to receive appropriate standard of care for their respective pathologies

Limitations

Small, retrospective case series
Short-term follow up

Next Steps

Longer-term follow up after robotic TAMIS
Robotic TAMIS for larger, more oncologically advanced lesions
Direct comparison between laparoscopic and robotic TAMIS
- Long-term oncologic outcome
- Post-operative recovery
- Ease of procedure for surgeon

Conclusion

- Robot-assisted TAMIS is a safe alternative to laparoscopic TAMIS for resection of appropriate rectal polyps and early rectal cancers.
- Laparoscopic TAMIS provides superior oncologic outcomes when compared with transanal excision, and Robot-assisted TAMIS seems to offer a similar benefit to the laparoscopic approach.
- Robotics may even provide a modality for resecting larger lesions, as well as more proximal rectal lesions due to the wristed instruments and superior visualization with the robotic camera.