24/7 Robotic Access in Emergency General Surgery: A Unique Platform for Perforated Peptic Ulcer Disease

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Introduction

- The management of peptic ulcer disease has transitioned from a surgical to a predominantly medical approach thanks to the introduction of PPIs.
- Operative intervention is reserved for complicated ulcer disease (perforation, hemorrhage, obstruction).
- Here we discuss two patients presenting with perforated peptic ulcer disease requiring urgent surgical intervention, emphasizing our institution's **24-hour access to the robotic surgical platform.**

Methods

- Two patients admitted to 321-bed community hospital with perforated peptic ulcer disease.
- Each underwent omental patch repair with the da Vinci XI robotic surgical system.
- **One surgery was performed on a Saturday at 12:50PM, while the other surgery was performed on a weekday at 02:00AM.**



Patient 1

- 85-year-old male presented to the emergency department with two days of abdominal pain. He was taking 845mg of aspirin daily for back pain.
- CT revealed pneumoperitoneum concerning for perforated duodenal ulcer.
- Underwent robotic-assisted omental patch repair of a 1.5cm perforated pyloric ulcer within 2 hours of evaluation by the surgical team.



Patient 2

- 55-year-old female presented to the emergency department with one week of abdominal pain. Smokes ½ pack of cigarettes a day and consumes 5 cocktails a day.
- CT revealed pneumoperitoneum and large volume ascites.
- Underwent robotic-assisted omental patch repair of a 1cm gastric ulcer within two hours of evaluation by the surgical team.

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Discussion

- The use of robotic surgery has increased over time and the application of robotic platform for acute care surgery is an emerging discussion in recent literature.
- The use of robotic assisted surgery during non-business hours epitomizes the opportunity to develop new techniques and compete in a rapidly evolving field.
- The dexterity afforded by the robot assisted our efforts to maintain a minimally invasive surgery for both patients.

Conclusions

- Two patients arrived in the emergency department meeting SIRS criteria secondary to perforated peptic ulcer disease.
- The robotic surgical system is available for use 24/hours a day, seven days a week at our community hospital.
- **It is crucial to provide patients with access to exemplary care regardless of the day or time of presentation.**