

Introducing Robotics into Parastomal Hernia Repair

David KERELLA¹, Romilly Hayward², Lara Hookway-Becares¹, Laura Muirhead³,
 Oliver J Warren²

¹Imperial College London-London (United Kingdom) - London (United Kingdom), ²Imperial College London; Chelsea And Westminster NHS Foundation Trust - London (United Kingdom), ³Chelsea And Westminster NHS Foundation Trust - London (United Kingdom)

Background

Parastomal hernias (PSH) remain a **challenging condition**, with **high recurrence rates** following repair. **Robotic surgery** offers novel, minimally invasive options for repair. **Real-time outcome analysis** is essential to ensure patient safety and enable cost- benefit decisions.

Method

- **Prospective** data capture for patients undergoing **robotic modified Sugarbaker parastomal hernia repair**, conducted during the **introduction of robotics** into a single-surgeon, high-volume practice.

Results

January 2023 – November 2024: 12 robotic PSH repairs.

All underwent **preoperative abdominal wall MDT discussion**, alongside multiple complex **open** repairs, performed over the same 2-year period.

- 7 (58%) male, median age **70** (IQR 67-77)
- Highly comorbid cohort - median **ASA grade III**
- **No** conversions to open
- Median EBL **0ml**, **no** blood transfusions
- Median length of stay: **2.5 days** (IQR 1-7)

Outcomes

- **75%** complication free recovery (n=9)
- **1** readmission
- **1** return to theatre (RTT)
- **2** recurrences
- **No** deaths within 60 days
- **Median follow up:** 4 months

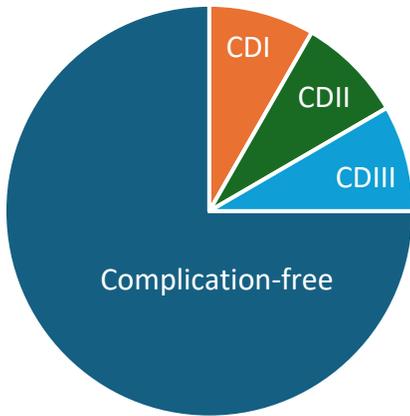


Figure 1: outcomes following robotic PSH repair
 CD=Clavien-Dindo Grade

Clavien-Dindo Grade	N(%)
I	1 (8.3%) (prolonged ileus requiring NGT)
II	1 (8.3%) (profound prolonged ileus requiring TPN)
III	1 (8.3%) (SBO/ileus requiring RTT)

Table 1: complications following robotic PSH repair
 NGT=nasogastric tube; TPN=total parenteral nutrition;
 SBO=small bowel obstruction; RTT=return to theatre

Operative Time

- **Overall median console time:** 79.5 minutes (IQR 58.5-93.5)
- **First 6 PSH repairs:** 84 minutes
- **Following 6 PSH repairs:** 75 minutes
 p=0.59

Conclusion

Our results highlight the challenges of introducing robotic PSH repair into practice. Whilst technically there were **no conversions to open** and relatively **short hospital stay**, **1 in 4** patients suffer some sort of **complication** and there were **2 recurrences**. We believe this reflects an extremely **comorbid cohort**, and the **challenge of the condition itself**. Ongoing assessment of a larger cohort alongside learning curve analysis are required to define patient selection and best operative technique.