Is Wireless Laparoscopy Ready for Prime Time?
The First Reported Human Use of Wireless Laparoscopy

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Background

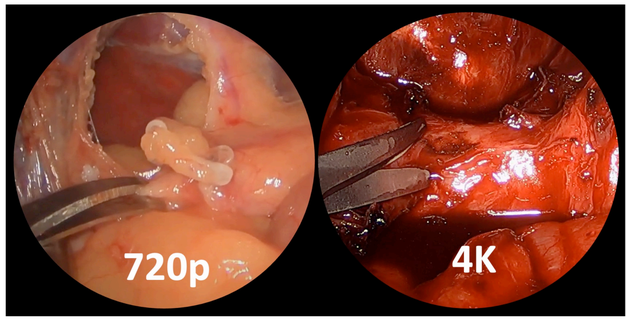
The primary objective of ArthroFree™ is to enhance efficiency and safety in minimally invasive surgery (MIS) through a wireless camera system. This technology aims to address limitations posed by traditional laparoscopic cameras, such as poor heat dissipation, cumbersome cords, and reduced surgical ergonomics.

Design

Lazurite®'s ArthroFree™ system is the first FDA approved wireless laparoscope. Its design leads to greater range of motion during procedures. The ArthoFree™ was assessed by analyzing outcomes from the first ever human use and healthcare provider feedback.

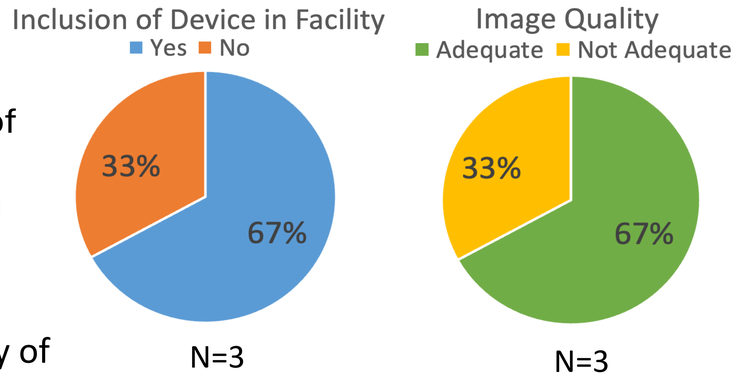
Results

Thirteen patients underwent outpatient operations with ArthroFree™. The operations included eleven cholecystectomy and two hernia repairs. No intraoperative complications were noted, and no cases were converted to traditional laparoscopy or laparotomy. The mean operating time was 69.08 (±15.02) minutes, and the mean estimated blood loss was 7.46 (±5.03) mL. No postoperative complications were noted.



Strengths:
- Adequate illumination
- Marked improvement of ergonomics
- Simplicity of setup and operation

Limitations:
- Suboptimal image quality of the monitor
- Small sample size



Conclusions

- This is the first reported human use of a wireless laparoscopic system.
- Clinical results supported efficiency and safety of the technology.
- There were no challenges unique to the system that affected patient care.
- Future enhancements will focus on elevating its display resolution to rival or surpass existing high-resolution laparoscopes.
- The successful deployment of ArthroFree™ in diverse surgical environments, including resource-limited settings, highlights its potential as a universally adaptable tool in global surgery.
- ArthroFree™ represents a strong first step toward a wireless operating room with the promise of redefining surgical standards as well as bridging gaps in surgical care worldwide.