Continuous Intraabdominal Pressure Monitoring During Laparoscopic Inguinal Herniorrhaphy: A Prospective Clinical Trial

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Background

- Intraabdominal pressure (IAP) plays a significant role in inguinal hernia recurrence
- **Current Recommendation**: Avoidance of strenuous activity postoperatively for 4 – 6 weeks
- Intraoperative IAP peaks remain inadequately characterized
- **Hypothesis**: Peak extubation IAP routinely exceeds that caused by strenuous activity

Methods

- Prospective, observational clinical trial
- Accuryn Monitoring System to monitor intraoperative IAP
- Total Enrollment: 22 patients
- Eligibility: Patients 18 – 65 years of age with a diagnosis of inguinal hernia undergoing laparoscopic repair



Results

Demographics

- Median age: 57.5 years
- Gender: 86% males
- Median BMI: 23.8
- Median ASA: 2

Operative Indications

- Bilateral hernias: 15 (68%)
- Unilateral hernia: 7 (32%)
- Recurrent: 5 (23%)

Operative Technique

- Totally extra-peritoneal (TEP): 21
- Transabdominal preperitoneal (TAPP): 1

IAP Recordings (median mmHg)

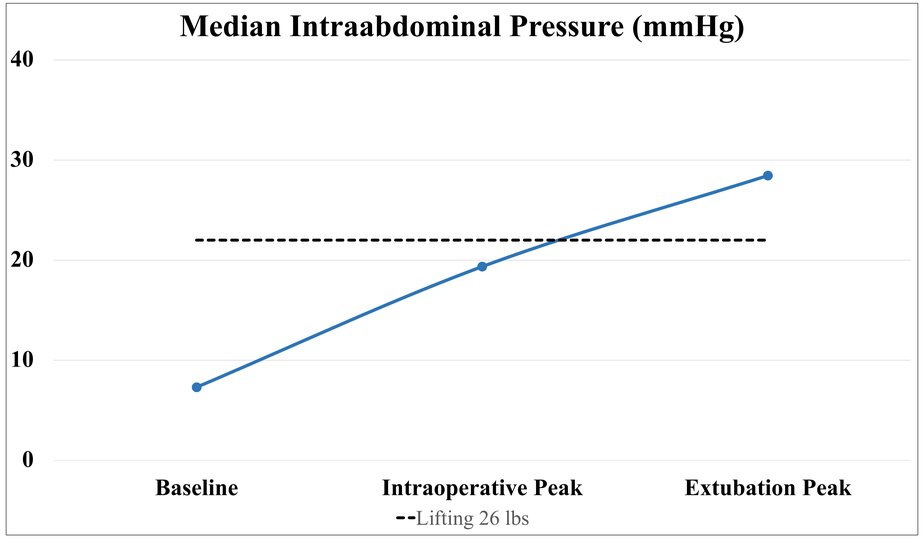
- Baseline: 7.30 [1.95 – 11.6]
- Intraoperative peak: 19.35 [11.8 – 56.0]
- Extubation peak: 28.4 [3.14 – 52.6]

Duration of Surgery (median)

- 73.0 [50.0 – 93.0] minutes

Short Term Complications

- Urinary retention requiring Foley: 4
- Constipation: 1





Conclusions

- The Accuryn monitoring system enabled collection of extensive, highly granular IAP level data which demonstrated increased levels of IAP during extubation.
- Providing real-time IAP data, this system may help surgeons and anesthesiologists better manage intraoperative and peri-extubation IAP peaks.

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