Post-Op Urinary Retention in Hip and Knee Patients

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Cleveland Clinic Enterprise

- 4 countries
- 18 hospitals
- 220+ outpatient locations
- 6,026 beds
- 20 patient-centered institutes
- 2.4 million unique patients

Cleveland Clinic Main Campus

- 1400+ beds, tertiary care center, 1/3 Intensive Care
- 50 buildings
- 167+ acres
- 3500+ Nurses

What is POUR?

- Post-Operative Urinary Retention

- No single accepted definition

- Many variations-all come to the same conclusion

Etiology

- Normal Function

- Disruption of normal function

Causes

- Anesthesia
- Medications
- Pain
- Fluids
- Type of surgery

Risk Factors

- Age
- Gender
- History- particularly Urological history
- Comorbidities
- Type of surgery
- Length of surgery

Risk Factors

- Type of Anesthesia
- Total IV fluids
- Opioids given

Signs/Symptoms of Retention

- Severe pain
- May be asymptomatic
- Abdominal discomfort
- Over-distention of bladder can cause:
  - Nausea, vomiting
  - Hypertension
  - Tachycardia

Long Term Impacts

Permanent vs. Temporary

Impact on Patient's Life

Why?

- Why perform the study?

Our Study

- Large tertiary care center
- Average 10 total joint replacements/day
- Adult only Phase 1 PACU
- 50 bed PACU
- Early Ambulation in PACU DOS

Study Goals

- Determine Incidence of POUR
- Determine difference between length of surgical time and development of POUR
- Compare incidence of POUR in anesthesia groups
- Determine if development of POUR was based on surgical site

13

Study Goals

- Correlation between OR fluid administration and development of POUR
- Correlation between opioid administration and development of POUR
- Compare urine measured via bladder scanner to actual urine obtained after intervention

14

Methods

- Descriptive Study
- Quantitative Study
- Sample group
- Current Practice

15

Current Algorithm

- How do we currently address this issue
- How does the study differ from current practice

16

Data Collection Tool

17

Data Collection Process

- Ask of our staff

- Instructions on how, who and when to scan

- Supportive roles

18

Equipment

- Bladder Scanner

- RN Participation

- Education

Data Analysis

- Project ran for 12 months
- Larger study sample size due to extended break

Conclusions

- 276 of 489 patients developed POUR

- Correlations?

Problems

- Accuracy of the bladder scanner
- Technique by each person using it
- Ensuring patients were scanned when appropriate
- Unknown urological history

Future

- What should we do for these patients?

Ways to Decrease POUR

- Pre-operative plan for those with history
- Longer case plan, thought for indwelling catheter for case
- Early assessment of patient bladder status
- Establish algorithm for handling bladder retention

Key Takeaways

- Early Assessment of Patient

- Prevention is KEY

25

?Questions?

26

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27

28