

Improving Discharge Times for Day Surgery Patients After Spinal Anesthesia

Certificate Course in Patient Safety & Quality Management

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BACKGROUND

- Spinal anesthesia (SA) is commonly used for day surgery
- Ability to avoid general anesthesia and opioid administration intraoperatively reduces the frequency of postoperative nausea and vomiting¹
- Faster recovery of alertness postoperatively is often desirable by outpatients
- Potential for delayed discharge associated with the unpredictable duration of SA, and postoperative urinary retention is a major concern
- Postoperative urinary retention (POUR) occurs at rates ranging from 7% to 52%²
- Large variation in rates owing to multiple factors influencing the development of urinary retention³
 - Surgical Procedure
 - Anesthetic Technique
 - Duration of surgery
 - Medications
 - Volume of IV fluid administered
 - Age
 - Gender
 - Pain
- Day surgery patients are typically discharged in 2–3 hours, but urinary retention may result in extended stays or even overnight admissions²
- Impact on nursing workloads and resource utilization
- Patient satisfaction may be decreased
- Increased demands on the system and delays to discharge may compromise patient safety
- Many institutions retain the policy of mandatory voiding after spinal anesthesia

OBJECTIVES

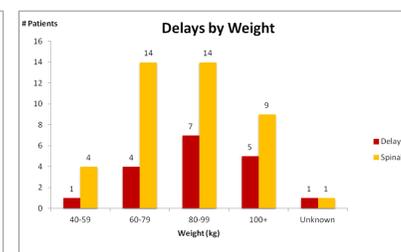
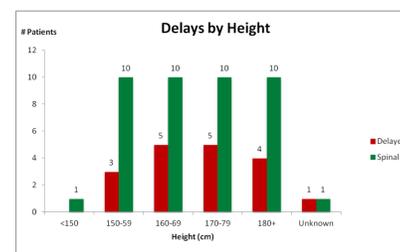
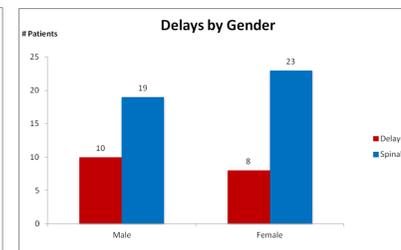
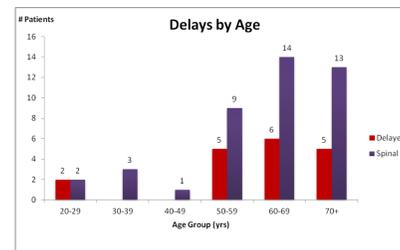
- To evaluate patients undergoing day surgery who received spinal anesthesia and experienced delays to recovery of micturition and discharge from hospital
- To determine potential areas that could be targeted for improvement of a well known consequence of spinal anesthesia

METHODS

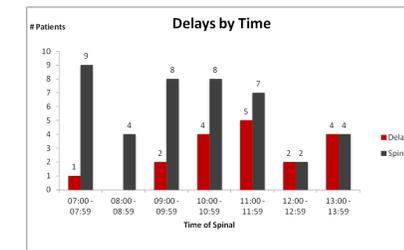
- Review of day surgery cases that received spinal anesthesia between July to December, 2015 in a tertiary care centre in downtown Toronto, Ontario
- Electronic charts were retrospectively reviewed for information on patient age, comorbidities, gender, weight, height, and spinal time of placement, dose of local anesthetic, time to void and discharge
- Additional information on need for bladder scanning and catheterization was collected
- Delays to recovery of micturition and discharge were identified if a patient was unable to void more than 3 hours after documented surgery end time and had a void time documented after 17:00

RESULTS

- Between July to December 2015, a total of 42 spinals were administered for day surgery patients
- 3 patients required admission, for reasons that were not related to delays in spinal regression or voiding
- There were 18 cases (42.9%) identified to have a delay to voiding and discharge
- Trends for delays include younger and older age groups, males, and increased weight
- All spinals (total of 6) placed after 12:00 experienced delays



RESULTS



Preference for Spinal Based on Comorbidities	Total	Delays
BMI	9	7
Airway (potentially difficult, instability)	5	4
Respiratory (OSA, COPD, Asthma, Pneumonia)	13	5
Postoperative Nausea and Vomiting (PONV)	2	0
None	21	5

- Spinals may be preferred based on patient comorbidities
- 5 patients who experienced delay to voiding had no comorbidities influencing preference for spinal anesthesia
- 1 patient was in the youngest age group, 4 were male, 2 patients were in increased weight categories, and none had spinals placed after 12:00

CONCLUSIONS

- There are multiple factors that may influence recovery of micturition post spinal
- Discussions are needed regarding the use of spinal anesthesia in younger patients, male patients, and placement of spinals later in the day if delays to discharge are a priority concern
- Consideration for dose adjustment in patients in increased weight categories
- Examination of cases which may be amenable to a local/regional anesthetic technique with sedation
- Further investigation of practice of adding opioids to spinals for day surgery
- Consideration for an accelerated discharge pathway for low risk patients that do not require voiding prior to discharge

REFERENCES

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3. Darrah DM, Griebing TL, Silverstein JH. Postoperative urinary retention. *Anesthesiology Clinics* 2009; 27: 465-484