POSTOPERATIVE URINARY RETENTION IN ABDOMINAL SURGERY

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• POUR has been defined as the inability to void in the presence of a full bladder.

• Slow urine stream
• Straining to void
• A feeling of incomplete bladder emptying
• Suprapubic pressure or pain \[^1\]
Incidences

- General surgery 3.8%
- Anorectal surgery 1-52%
- Hernia repair 5.9-38%
Mechanism of micturition

Coordination of the central and peripheral nervous systems for normal urinary voiding
Preoperative risk factors

- Age (2.4 times in patients over 50) \[1\]
- Gender (4.7% compare to women 2.9%) \[1\]
- Benign prostate hyperplasia
- Type of surgery
- Previous pelvic surgery
- Neurological diseases
Intraoperative risk factors

- Large amount of IV >750ml (anorectal and hernia repair surgery 2.3 times more) [2]
- Duration of surgery [3]
- Anesthetic and analgesia agents
Spinal anesthesia

- Act on neurons segments S2-S4
- Contraction of detrusor abolished in 2-5 min and recovery depends on sensory block
- Use of long-acting local anesthetics is related to a higher incidence of POUR [4]

Spinal analgesia

- Decrease the parasympathetic effects
- Impaired coordination between detrusor and internal urethral sphincter
- The onset and the duration depends on the TYPE and DOSE of opioid
Epidural anesthesia

- Similar to intrathecal anesthetic

- Incidence of POUR with epidural anesthetics for inguinal herniorrhaphy is lower than with spinal anesthesia

Epidural analgesia

- Site of insertion: lumbar epidural > thoracic epidural

- Not dose-dependence[5]
Postoperative risk factors

- Bladder volume at the arrival in PACU > 270ml\[^6\]
- Excessive liquid intake
- Higher incidence of POUR in continuos epidural infusion compared with PCA
- Constipation
- Mobilization
Prevention

- Identify patients at risk (type of surgeries, medical history…)

- Fluid restriction in anorectal surgery and inguinal hernia repair

- Appropriate anesthesia and analgesia strategy

- Fluid restriction in the postoperative period

- Avoid constipation and encourage an early mobilization

- Prescription of daily drugs of patients
Diagnosis

*Voiding in patients managed with or without ultrasound monitoring of bladder volume after outpatient surgery.*

Pavlin D, Pavlin E, Quinn HC, Taraday JK, Koersschens ME.
Complications and adverse effects

- Autonomic response
- Infection
- Bladder overdistension

Incidence of 44%

>500ml diagnose and treated 1-2h

Further investigation
Clinical management

1. Alpha receptors antagonists
   (Tamsulosine 0.4mg) [7]
2. Ciprofloxacin 500mg

Removal within 4-5 days
Conclusions

- Multifactorial
- Identification of risk factors
- Proper anamnesis and exploration
- Ultrasound if doubts
- Removing avoidable causes
References


