Postoperative urinary retention

Post-op urinary retention is very common, especially following lumbar spine surgery. It encompasses a subset of conditions associated with urinary retention in general.

1. spinal cord or cauda equina compression: often (but not always) accompanied by other new neurologic deficit.When the result of surgery, may be due to:

a) nerve or spinal cord compression: in the post-op setting, possible sources include: hematoma, instrumentation (e.g. pedicle screws), bone graft material, fragments from bone fracture

b) nerve or spinal cord injury during surgery

2. urinary tract infection (UTI)

3. immobility

4. narcotics

5. constipation

Postoperative urinary retention (POUR): occurs in ~ 4% of all surgeries, and 20–40% in neurosurgical patients after general anesthesia [1) 2)].

Felt to be secondary to a combination of patient predisposition (eg BPH) along with anesthetic. Propofol, narcotics, benzodiazepines, inhaled anesthetics, and local intrathecal and epidural have all been shown to impact bladder contraction and coordination of micturition. POUR should be managed with CIC or indwelling catheterization along with alpha-blockers in men. Voiding trial may be done as soon as postoperative day 1 to avoid prolonged catheterization but keeping the Foley for 3–4 days has been shown to decrease the need for replacement of the catheter. [3)] POUR may persist > 1 week. Preoperative use of alpha-blockers in at-risk patients has shown protective against POUR in some studies, but not a significant difference in other studies [4)]. Urgent intervention is recommended to avoid long term sequela of bladder distention

1)
Baldini G, Bagry H, Aprikian A, et al. Postoperative urinary retention: anesthetic and perioperative considerations. Anesthesiology. 2009; 110:1139–1157
2) , 3)
Lee KS, Koo KC, Chung BH. Risk and Management of Postoperative Urinary Retention Following Spinal Surgery. Int Neurourol J. 2017; 21:320–328
4)
Basheer A, Alsaidi M, Schultz L, et al. Preventive effect of tamsulosin on postoperative urinary retention in neurosurgical patients. Surg Neurol Int. 2017; 8. DOI: 10.4103/sni.sni_5_17