Quick Guide Feline Urethral Obstruction Protocol

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Male Cats < 10 years of Age

- Presentation Considerations
  - Provide analgesia
    - Full mu agonist is recommended due to quicker onset of action
  - Place IVC
  - Assess volume and hydration status
    - Restore vascular volume deficits
      - 10 ml/kg of balanced isotonic crystalloid (ex: LRS, Norm-R)
    - Start addressing hydration deficits
  - Evaluate lab work
    - Address hyperkalemia especially if associated with ECG changes
      - IV fluids
      - Calcium gluconate or Calcium Chloride
        - 50 to 100 mg/kg slowly IV (monitor for bradycardia)
        - Raise excitatory membrane potential (hyperkalemia raises resting membrane potential)
      - Dextrose
        - 2 gram/unit insulin IV diluted 1:4
      - Insulin
        - Regular Insulin 0.2 to 0.5 U/kg IV
      - +/- NaHCO3
        - 1 mEq/kg IV
- Anesthesia Considerations for Urethral Catheterization
  - Recommend general anesthesia to provide best urethral relaxation
  - Intra-vascular volume normalized prior to anesthesia
  - Hypothermia is a sign of shock and should be addressed as well prior to induction
  - Improve hyperkalemia prior to urinary catheter placement
  - Recommend benzodiazepine as sedative added to opioid for muscle relaxation
  - All patients to be intubated and airway secured
    - Best to be prepared rather, then reactionary to a complication
  - Attach all patients to ETCO2 to monitor ventilation status

        - Even on injectable anesthesia
        - Utilize an ambu bag and ventilate patient
    - Avoid renally excreted anesthetics such as ketamine
    - Consider use of atracurium for urethral skeletal muscle relaxation
- Urinary catheter
    - Placed aseptically
    - Never have urine bag above patient so urine excreted does not flow back into patient
    - Use new urine collection systems
    - If need to remove urine sample from collection system for sampling be sure to alcohol port prior to insertion of needle
    - Please follow urinary catheter care protocol
- General considerations
    - Antibiotics in FLUTD cats not recommended on routine basis as less than 2% of young cats have a bacterial cystitis
    - After the cat is unobstructed, obtain a urine sample via your sterile catheter. Perform a urine specific gravity and a sediment analysis
        - No bacteria seen do not start antibiotics
        - If bacteria is seen, submit culture and start appropriate antibiotics
        - The majority of FLUTD cats will not have a UTI. Urinary catheters increase the risk of acquiring a UTI, but antibiotics should not be used in a prophylactic fashion while a urinary catheter is in place as bacterial resistance can result.
    - Just prior to pulling the urinary catheter, a sterile urine sample should be obtained from the urinary catheter line. Swab the port with alcohol and allow to dry. Using a 25ga needle and syringe obtain a sterile urine sample. Swab the port with alcohol again after obtaining your sample. Submit the urine sample for a urine culture
    - Can also obtain urine sample after urinary catheter removed via cystocentesis

Male cats > 10 years old and first time obstruction

- Potential for bacterial etiology higher so the following are changes to the above protocol
- Evaluate urinalysis and sediment
- Submit urine culture from time of urinary catheter placement
- If evidence of bacteriuria start antibiotics, if no bacteriuria present do not start antibiotics
- Obtain culture prior to urinary catheter being pulled
    - Same protocol at above
- If initial culture is not back prior to discharge send home with 5 days of antibiotics pending cultures
    - Please utilize first line antibiotics such as beta lactams, not a third generation cephalosporin like Convenia without culture and sensitivity

- We need to practice appropriate antibiotic stewardship