Urinary Tract Infections after Robotic Assisted Laparoscopic Pyeloplasty (RALP): Are Urine Cultures and Antibiotics helpful?

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Disclosures

• None
Variability in Surgeon Use of Urine Cultures and Antibiotics with RALP

- Practice Pattern A
- Practice Pattern B
- Practice Pattern C

Urinary Tract Infection (UTI) Rate?
Retrospective Review Jan 2014 - Oct 2018

N=190

Excluded
Vesicoureteral reflux (N=18)
  Inadequate F/U (N=9)
  Older than 18 years (N=7)
  Other (N=4)

N=152*
  included in analysis

Urinary tract infection
  – Fever or urinary symptoms
  – Positive urinalysis
  – Positive urine culture with >=10K colony of single uropathogen
  – Tracked until 60 days after stent removal

*One patient with re-operative pyeloplasty, yielding 153 surgical encounters
Cohort Demographics

Sex

- Male 72%
- Female 28%

Circumcision Status
- Uncircumcised 22%
- Circumcised 73%
- Unknown 5%
Cohort Demographics

History of UTI

- Yes: 22%
- No: 78%

On Antibiotic Prophylaxis

- Yes: 15%
- Unknown: 1%
- No: 84%
Peri-RALP Urine Culture Use and Results

- Obtained in 70% of cases:
  - Pre-operative RALP: 68%
  - Intraoperative RALP: 97%

- Obtained in 91% of cases:
  - 3%

- Positive
- Negative
Post-RALP Antibiotics Prescribed

- Yes: 55%
- No: 45%
Peri-Stent Removal Urine Culture Use and Results

- Pre-Stent Removal:
  - Obtained in 66% of cases:
    - 60%
  - Obtained in 4% of cases:
    - 40%

- Intraoperative Stent Removal:
  - Obtained in 91% of cases:
    - 96%
Post-RALP Urinary Tract Infections

Total Post-RALP UTI: 8/153 (5.2%)

Factors associated with post-RALP UTI
- Uncircumcised status
- Pre-operative chronic prophylaxis
- Pre-operative RALP Ucx/UA
- Intra-operative stent removal Ucx/UA

Factors NOT associated with post-RALP UTI
- Use of Post-operative RALP antibiotics
- Intra-operative RALP cultures
- Pre-operative stent removal Ucx/UA
Limitations

• UTI rate was too low for multivariable analysis
Take Away Points and Future Direction

• Post-RALP antibiotic use did not affect UTI rate

• Certain patients with risk factors (uncircumcised status, on chronic prophylaxis, and positive pre-RALP urine culture) may benefit from post-RALP antibiotics

• Data will be used to improve our robotic care pathway to reduce use of urine culture and post-RALP antibiotics