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INCIDENCE, RISK FACTORS AND MANAGEMENT OF PYOCYSTIS IN A REMNANT BLADDER AFTER ILEAL CONDUIT URINARY DIVERSION FOR BENIGN AETIOLOGY

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Introduction

- Following ileal conduit urinary diversion for benign aetiology, many patients have a defunctionalised remnant bladder.
- It is well recognized that pyocystis is a common complication in this setting and can be difficult to treat.
- In our cohort of patients with remnant defunctionalised bladders after urinary diversion (for benign causes) we sought to assess the incidence and risk factors for pyocystis and evaluated the management of this condition including requirement for subsequent cystectomy.

Methods

- A retrospective review was performed to identify all patients at a single institution undergoing ileal conduit urinary diversion (benign aetiology) over a 9 year period (1997-2004).
- Data sets collected: Demographics, co-morbidities, indication for diversion, incidence of post-operative pyocystis, management of pyocystis and requirement for remnant bladder cystectomy (any cause).
- Statistical analysis was performed to assess if any patient factors were associated with the development of pyocystis or with requirement for subsequent cystectomy.

Results (1)

- Over the 9 year period studied, 81 patients were identified.
  - Mean age 46y (range 2-78y)
  - Mean follow-up 49 months (range 6-252 months).
  - N=66 (81%) female
  - N=15 (19%) male
- Indications for ileal conduit urinary diversion:
  - End-stage complex urinary incontinence
  - Atonic bladder
  - Bladder pain syndrome
  - Fowler's syndrome
- 24% (n=19) of the cohort developed pyocystis.
- Treatments for pyocystis included:
  - Antibiotic therapy
  - Intermittent self catheterization
  - Remnant bladder washout
  - Remnant bladder cystectomy

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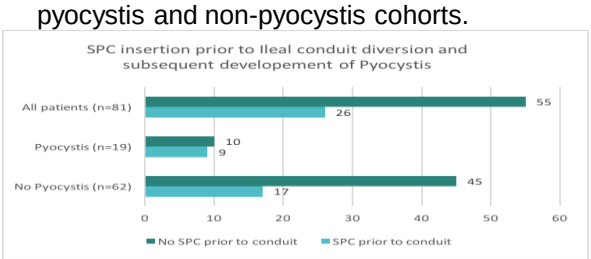
Results (2)

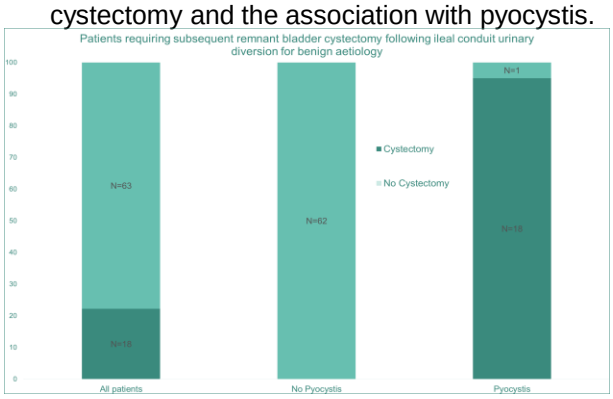
- Table 1 shows the differences in demographics for patients with and without pyocystis.

	Number of patients (%)	Mean Age (range)	Male (%)	Female (%)
No Pyocystis	62 (76)	46.39 years (2-78y)	9 (60)	53 (80)
Pyocystis	19 (24)	45.78 years (25-67y)	6 (40)** **P=0.09	13 (20)

- No patient factors were found to have a statistically significant association with the development of pyocystis but male gender and pre-diversion suprapubic catheterisation show a trend towards being associated with pyocystis.
- Graph 1 (below) shows the association between pre-operative suprapubic catheterisation in the pyocystis and non-pyocystis cohorts.



- Graph 2 shows the requirement for subsequent cystectomy and the association with pyocystis.



- 95% of patients with pyocystis require subsequent cystectomy and this association is statistically significant ($p<0.01$)
- The only patient with pyocystis not undergoing cystectomy had exhausted all non-surgical options but was not fit for further surgery.

Conclusions

- In our cohort **pyocystis occurs in 24%** of patients after ileal conduit urinary diversion for benign aetiology.
- **Pyocystis is difficult to treat** and does not respond to conservative treatments with **remnant bladder cystectomy required in 95% of cases.**
- No statistically significant associations were found between patient factors and development of pyocystis. However we note a trend in our data for male gender and suprapubic catheterisation with the development of pyocystis.
- As our cohort matures and expands we postulate that increased patient numbers may show this to achieve statistical significance.