Antibiotic bladder irrigation in preventing and reducing chronic urinary catheter related urinary tract infections (UTI)

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Background

• Recurrent UTI is a common complication of chronic urinary catheter use.
• We report our experience with the use of antibiotic bladder irrigation to reduce catheter associated UTI and systemic antibiotics result in a decreased need for broad-spectrum antibiotic use which may ultimately serve to decrease length of hospital stay, duration of therapy, and antimicrobial costs.

Objective

• Chronic catheter associated UTI can associate with MDR organisms due Multiple use of broad spectrum antibiotics

Methods

• Retrospective chart review of patients treated with antibiotic bladder irrigation for recurrent UTI related to chronic urinary catheter (2013-2016).
• Data collected include demographic, co-morbidities, urological anomalies, symptoms, documented pathogens during episodes of infection, and irrigation medication used.
• Antibiotic regimen included: gentamicin, gentamicin alternated with piperacillin-tazobactam, or tobramycin once weekly.
• Parameters for successful therapy and alleviation of symptoms included complete relief of symptoms for six months and no systemic antibiotics use for six months post initiation of therapy, or reduced frequency of infections for one year post initiation of therapy.

Results

• 39 patients were enrolled, all were patients who had been referred to infectious disease physicians after persistence of symptoms despite multiple rounds of systemic antibiotics and had at least 6 episode of documented UTI despite following guideline for aseptic urinary catheter insertion and care.
• Mean age 66.5 y (range 27-92), 69% male. Most common urologic problem was neurogenic bladder in 48% and prostate or bladder surgery. 5 self-catheterize, 12 had suprapubic catheter and 22 had chronic indwelling catheter. Most common co-morbidities include: DM, BPH, paraplegia, spina bifida and multiple sclerosis.
• Most common presenting symptoms were abdominal pain 49% and fever 34%.
• Most common organisms were Escherichia coli 38%, Pseudomonas aeruginosa 23% and Enterococcus faecalis 18%. 67% used gentamicin bladder irrigation.
• 26 (66.67%) met the criteria for alleviation of symptoms and success with antibiotic irrigation therapy, and a further four featured improvement of frequency of symptoms despite not successfully meeting the study’s pre-set criteria for full improvement. Patient did not report any associated side effect.

Conclusions

Use of antibiotic bladder irrigation was successful in reducing symptom frequency and requirement of systemic antibiotics. Further Studies needed to assess the benefit of this mode of therapy

Disclosures

• None of the authors have anything to disclose