Questions
Session 6: Urodynamics
Responses by
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1. The role of bacteriophages and vaccines in the treatment and prevention of urinary tract infections?
   - Bacteriophages and Vaccines are potentially an alternative for the treatment of bacterial infections, but their use is still experimental.
   - Only a validated study has been held in adults but not in pediatric population.

2. Bladder instillation - "for" and "against"?
   - In those with recurrent UTI, intravesical instillation of gentamycin or neomycin/polymyxin may be an option.
   - It is an alternative for prophylaxis or when all other systemic treatments have failed, even if it is still an off-label therapy.
3. **Fighting against antibiotic-resistant bacteria?**

- Antimicrobial resistance is primarily caused by antibiotic overuse and misuse, which results in a decline in the ability of antibiotics to treat infections.
- Higher prevalence of UTI causative agents other than E. coli in children with neurogenic bladder, should be taken in account during initial therapy choice.
- UTIs are common but difficult to treat, because are frequently caused by multidrug-resistant bacteria.
- The real usefulness of antibiotic treatment must be carefully considered in this population, in order to avoid misuse.
- Positive urine culture cannot be utilised as a solitary measure for the diagnosis of UTI due to the high incidence of asymptomatic bacteriuria in children with neurogenic bladder on CIC.
4. Leukocyturia without fever – to treat or not?

- No treatment is required.
- Different situation when leukocyturia is associated with fever.
- A combination of symptoms and laboratory measures is recommended for the diagnosis of UTI.
  - This combination includes: ≥2 symptoms (fever ≥38°C, abdominal pain, new back pain, new or worse incontinence, pain with catheterization or urination, or malodorous/cloudy urine) and ≥100 000 CFU/mL of a single organism and ≥10 WBC/HPF on urine microscopy or equivalent method.

- There are no advantages in using antibiotic prophylaxis in children with neurogenic bladder who are on CIC.
- Because continuous antibiotic prophylaxis (CAP) creates more bacterial resistance.
- A Cochrane review supports the use of cranberry products to reduce the risk of symptomatic UTIs.
- Prophylaxis is recommended only in selected cases, hereby phosphomicine and nitrofurantoine are useful.
- Bowel management is useful too.

No evidence related to COVID 19 has been reported.
6. When they recommend doing the renal scintigraphy. Nephrologists generally want to wait a little more than 3 months to see the real scar, but urologists do not.
   - There is a general agreement to wait at minimum 3 months in order to be sure to detect scars, sometimes better 6 months.

7. Do you consider circumcision in young male infant to prevent UTI? If so, up to what age?
   - In some cases, circumcision could be useful in order to facilitate CIC, and there is evidence about reduced UTI.
8. Re: reimplantation - Cohen produces very good resolution of reflux. But adult urologists find it a hinderance for subsequent endourological procedures. What has been your experience with your adult colleagues? Do they favour lich gregoir?

- The concern with Cohen procedure could be only related to difficulties to create a valid tunnel when there is a very trabeculated bladder; here, the lich gregoir technique could be an advantage.
- Limits for endourological procedure no longer have to be considered, thanks to flexible endoscope.

9. After bladder augmentation, do you stop the anticholinergic therapy?

- Bladder augmentation must increase capacity and reduce detrusor pressure,
- UD will confirm this, and then anticholinergics theoretically are not more required.
- In some cases, in long-term management, positive experiences with onabotulinum toxin A use on native bladder have been reported, according to UD
10. What percentage of patients experience regression or reduction in the degree of vesicoureteral reflux with adequate conservative therapy and intermittent catheterization?

- Reducing bladder pressure, increasing bladder capacity and improving bladder emptying is common to observe reducing or regression of VUR as UTI.
- Important to consider is a secondary reflux that could relapse after bladder neck surgery performed for ameliorating continence.

11. What medications are used to treat UTI caused by resistant bacteria?

- The choice of antibiotic should be based on local antimicrobial sensitivity patterns, and should later be adjusted according to sensitivity-testing of the isolated uropathogen.