OVERACTIVE BLADDER in children over 5 years old, prescribing algorithm

Oxybutynin, tolterodine, trospium, solifenacin and mirabegron are ‘Amber Initiated’ in paediatrics

Children with symptoms of overactive bladder

Oral Oxybutynin standard release
(licensed in children aged > 5 years)
Review in 6 weeks

Success
Increase dose if necessary according to response (BNFc)
Review every 3-6 months
Consider modified release

Failure
Discuss treatment failure with senior
Either / OR

Tolterodine standard release
(not licensed for use in children)
Refer to BNFc for dosing advice

Success
Increase dose if necessary according to response (BNFc)
Review every 3-6 months
Consider modified release

Failure
Discuss treatment failure with senior

Oxybutynin patch (if can’t take tablet whole)
(Not licensed for use in children)
- 4 – 9 years old ¼ patch twice weekly
- 10 – 12 years old ½ patch twice weekly
- >12 years old 1 patch twice weekly
Provide Tegaderm and application advice
Review in 6/52 then 3-6 months if tolerated

Success
Increase dose if necessary according to response. Max adult dose 20mg BD (BNF)
Trospium: Consider modified release

Failure
Add Solifenacin 5mg daily to Mirabegron at 25mg daily (Hospital only)

Solifenacin
(Not licensed for use in children)
Start at 5mg daily
Failure in 7 years and over
Increase dose if necessary according to response. Max adult dose 10mg daily (BNF)
Review every 3-6 months

Success
Increase dose if necessary according to response. Max adult dose 50mg daily (BNF)
Review every 3-6 months

Mirabegron
(Not licensed for use in children)
Start at 25mg daily
Monitor BP and heart rate 3 monthly

Success
Failure d/w consultant

Trospium standard release
(if >12 years or <12 if can swallow tablet whole)
(licensed in children aged >12 years)
5mg – 10mg BD initially

Success
Trospium
Increase dose if necessary according to response. Max adult dose 20mg BD (BNF)

Discussion

Success = no side effects, improvement
Failure = side effects, no improvement

Transfer drug prescribing to GP when the patient is stable on treatment

(Version: 2.0 Review date: Apr 2022
(or earlier if there is significant new evidence relating to this recommendation)
When prescribing antimuscarinics, the specialist who initiated the treatment would have considered the followings:

- antimuscarinics known to cross the blood-brain barrier (for example, oxybutynin) have the potential to cause central nervous system-related side effects (such as confusion)
- antimuscarinic treatment can reduce bladder emptying, which may increase the risk of urinary tract infections
- antimuscarinic treatment may precipitate or exacerbate constipation

Where a patient failed treatment with tolterodine:

- oxybutynin patch is a preferred choice for a child who cannot take tablets whole. Do not prescribe for any patient with eczema or previous history of skin allergies/sensitive skin.
- trospium should be first option in all children over 12 years who can tolerate tablets as it is licenced and cheaper than the patch, and in children under 12 years who can take tablets. Advise to take tablets on an empty stomach. If problems with compliance, side effects or poor response, consider oxybutynin patch.

NB: Not all antimuscarinics have a UK marketing authorisation for use in children.

Please refer to the individual Summary of Product Characteristics for full list of cautions, contraindications, drug interactions and adverse reactions.

Primary Care prescribing

- Prescribing will be continued in primary care under amber initiated criteria.
- Patients will have been stabilised on treatment by the initiating specialist (including specialist consultants, urology advanced nurse practitioners) before GP prescribing commences.
- The specialist should provide primary care with a diagnosis and treatment plan including review dates. The specialist will inform the patient / carer where a medicine is being used “off-label” and obtain their consent. This will be documented and the GP informed.
- The specialist will continue to monitor and supervise the overall treatment and review of the patient.
- The GP would inform the specialist of any concerns or side effects associated with the drug.
- If the GP does not feel it is appropriate to take on the prescribing then the prescribing responsibilities will remain with the specialist. The GP should inform the specialist the reason for declining.

Monitoring recommendations:

- Mirabegron: regular monitoring of blood pressure and heart rate at least once every 3 months. See NIH blood pressure tables in paediatrics and adolescents for reference values.
- Anticholinergic side effects e.g. constipation, urinary retention, dry mouth, blurred vision, skin flushing, transient bradycardia

How long the medicine should be prescribed for

The duration of treatment benefit may vary between individuals. Termination of treatment will be carried out by the specialist.

Ongoing role of specialist

Advice of the specialist should be sought if any concerns or if serious adverse effects are reported by the patient.

Notify the specialist of any lack of clinical efficacy or non-adherence with the treatment plan or if patient did not attend appointment(s).
References