



An update in Urinary Incontinence: from 'one size fits all' to a bespoke service

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More than 1 in 10 women will suffer from urinary incontinence at some point in their lives and it is responsible for a significant economic burden, not to mention a reduction in quality of life for patients, with many changing their social lives to accommodate the problem and some feeling that they can't leave the house at all.

It is particularly after childbirth or pelvic surgery that patients suffer urinary symptoms. There are two common reasons for this. The first is the overactive bladder syndrome (OAB), previously known as detrusor over-activity characterised by frequency, nocturia, urgency and urge incontinence. This syndrome is as a result of abnormal detrusor muscle contractions, which may be associated with neurological disease in which case the condition is more accurately referred to as neurogenic detrusor over-activity (NDO).

The second reason for urinary incontinence is stress leakage which is caused by pelvic floor and/or urethral sphincter weakness and results in urinary loss on raised intra-abdominal pressure. Of course, the two are not mutually exclusive and many patients will have a combination of both.



Initial assessment & management in primary care

Once a history has been taken and an examination performed to exclude overflow incontinence, patients should have a urine dipstick to exclude infection as the cause of the symptoms and to detect non visible haematuria which would require an urgent referral. A bladder diary is also useful, as it will objectify the patient's symptoms, and identify poor drinking habits such as excessive caffeine or fizzy drink intake that can exacerbate urinary storage symptoms.

On the basis of the history and bladder diary it is usually possible to categorise patients as to whether their symptoms are predominantly stress, OAB, or mixed. If the patient has stress-related symptoms, they should be referred for pelvic floor physiotherapy in the first instance – preferably under the supervision of a specialist physiotherapist. Weight loss may also improve symptoms. If the patient has OAB symptoms then they should eliminate caffeine, and be referred for bladder training – again via a physiotherapist. A combination approach should be employed for those with mixed symptoms.

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Medical management of OAB in primary care

For those patients who fail to respond to simple measures, the first-line medical therapy is with antimuscarinic drugs, either oxybutynin, or one of the more selective agents such as fesoteradine, solifenacin or trospium. All work by the same biochemical pathway which suppresses acetylcholine mediated detrusor muscle contraction.

In terms of side effects, patients will tend to suffer from a dry mouth, dry eyes, and constipation, although the newer agents are more bladder-specific so have a more favourable side effect profile.

A new second line medical therapy has recently become available called mirabegron, which as a β_3 agonist, allows detrusor muscle relaxation and is approved by NICE for patients in whom antimuscarinics are contraindicated, clinically ineffective, or where the side effects are unacceptable.

An alternative to oral therapy in women whose symptoms coincide with the menopause is to use topical oestrogen therapy which patients may find preferable to a daily tablet.

An update in Urinary Incontinence:

Secondary care interventions – stress incontinence

If conservative therapy in stress incontinence fails, then patients should be referred to an incontinence specialist. They will usually undergo a cystometrogram (CMG) to objectify the leakage as well as to identify any subclinical OAB that may adversely affect the outcome of any surgery.

Depending on the volume of leakage, and assuming that any coexisting OAB has been controlled, the patient may be offered one of the minimally invasive surgical procedures; either a bladder neck bulking procedure (for those with small volume leakage), a synthetic mid-urethral tape (**figures 1 & 2**), or an autologous pubovaginal sling.

Bladder neck bulking has an approximate 65% improvement rate compared with 85% for the sling procedures but the latter carry a more significant chance of complication including bladder or urethral injury, frequency and urgency, mesh erosion, and voiding dysfunction which may, if severe, require the patient to intermittently self catheterise until it resolves. Careful counselling is needed to find the most appropriate treatment for each individual patient.



Fig.1.

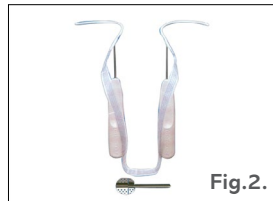


Fig.2.

Secondary care interventions-OAB

Patients with OAB should be referred to secondary care if they fail treatment with oral therapy. The management of OAB in secondary care has been revolutionised by the introduction of two new and minimally invasive therapies – intradetrusor Botulinum toxin (BTX) injections, and posterior tibial nerve stimulation (PTNS).

BTX works by inhibiting vesicular release of acetylcholine from the neuromuscular junction in the detrusor muscle, thus inhibiting its contraction. It is injected directly into the detrusor, usually with a flexible cystoscope under local anaesthetic (**figure 3**). It exerts its effect for, on average, 9 months after which the injections need to be repeated. Other than relatively minor local complications such as mild bleeding and dysuria, it is a well-tolerated procedure.

However, there is a 10-15% chance of inability to void following the injections, and most specialists will elect to teach their patients intermittent self catheterisation (ISC) prior to Botox therapy.

A second option for treatment in patients who are refractory to oral therapies is use of a nerve stimulator. Traditionally, this was in the form of sacral neuromodulation (SNM), which involves placement of an electrode into the 3rd sacral foramen to stimulate the S3 nerve root.

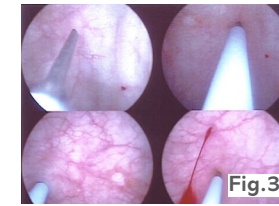


Fig.3.



Fig.5.

Patients will have a temporary electrode to assess response prior to implantation of a permanent stimulator, usually into the buttock (**figure 4**). Complications of this procedure include bleeding and infection or migration of the leads or stimulator box.

The invasive nature of SNM together with the relatively high need for re-operation led to the development of PTNS, which is approved by NICE for treatment of both urinary and faecal incontinence. This technique also stimulates the sacral plexus but in a retrograde fashion via the posterior tibial nerve at the medial malleolus using an acupuncture needle (**figure 5**). Side effects include minor bleeding or pain at the needle insertion site and it requires a course of treatment (usually 12 at weekly intervals) followed by 'top-up' treatments usually once a month.

However, it carries none of the risk of self catheterisation associated with Botox or the risks of multiple procedures associated with SNM, or any of the side-effects of oral medication and, as such provides us with a low-risk alternative in suitable patients. Although this treatment is not currently offered on the NHS locally, I am delighted that I am able to offer it at Parkside.

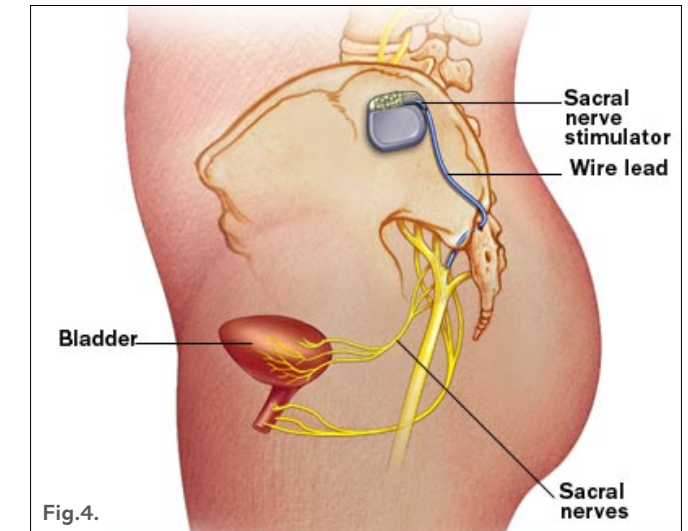


Fig.4.

Summary

Advances in the medical and surgical management of urinary incontinence have given us a variety of new techniques to suit our patients, depending on expectation, general health and type and degree of urinary leakage.

Not so much 'one size fits all' but a bespoke approach!