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**LINDER:**

I'm excited to talk to you today about overactive bladder, a common, bothersome problem that many of our patients face, with a variety of innovative treatments available. The management of overactive bladder typically progresses in a stepwise fashion, from conservative measures to oral medications and even procedures that can be performed in the office or in the operating room.

Initial management typically focuses on lifestyle modifications, including the avoidance of bladder irritants, things like caffeine, carbonation, citrus, spicy food, and alcohol; the use of timed voiding, or urge-suppression techniques; the management of constipation, if present; and discussing the impact that weight loss can have on urinary symptoms. For those with pelvic floor muscle weakness on exam, pelvic floor physical therapy can also be utilized.

There are also oral medicines available, both anticholinergics, as well as beta-3 agonists, which can help relax the bladder. Choice of a specific medication is based on the risk-benefit profile and in discussion with the individual patient.

For those with symptoms refractory to the measures we just discussed, there are other treatments available that can be performed in the office or in an operating room setting, such as bladder Botox injection, sacral neuromodulation, or tibial nerve stimulation. Bladder Botox injection is a cystoscopic procedure that can be performed in the office or in the operating room, depending on the patient's level of comfort and preference. During the procedure, a cystoscope is inserted into the bladder, and a small needle is used to inject the medicine into the bladder wall.

Many women will have significant improvement with this treatment, despite not having had success with the measures we already discussed. Given the nature of Botox, the treatment will wear off over time and would need to be redone. On average, this is roughly every six months. One note about this therapy is that there is a small risk of urinary retention, and so patients would need to be willing and able to catheterize themselves temporarily until the medicine wore off, should they encounter this.

Another option is sacral neuromodulation, which involves the placement of a small implantable device which sends electric signals to the nerves to the pelvis. Similar to bladder Botox, many women will have significant improvement in their symptoms with this, despite not having responded to oral medicines or other therapies.

Sacral neuromodulation is performed in two stages. During the first procedure, a small wire is placed through the S3 foramen and used to send signals to the pelvic nerves. Patients test this lead for one to two weeks using an external battery source. If they're having symptom improvement, they would then proceed with placement of a more permanent battery subcutaneously.

One note about this therapy is that it has FDA approval for both urinary incontinence, which is refractory to other measures, as well as bowel incontinence, or accidental bowel leakage. So for patients with dual incontinence, sacral neuromodulation may have an added benefit.

A third type of procedure is tibial nerve stimulation. This is a procedure performed in the office using a small needle which is placed behind the medial malleolus, and then stimulated externally for 30 minutes. This therapy is given once a week for 12 weeks. And if patients have adequate symptom improvement, they can proceed to maintenance therapy, which is roughly every three weeks.

So in summary, overactive bladder is a highly prevalent condition that can have a large impact on our patients' quality of life. It's important for clinicians to understand the initial evaluation and management, including the use of behavioral modifications, pelvic floor physical therapy, and oral medications.

For patients with refractory symptoms, consideration should be given to specialty referral for further discussion of more advanced therapies, such as bladder Botox injection, sacral neuromodulation, or tibial nerve stimulation.