How Long Until the Next Break?? Overactive Bladder in Men and Women

Rupa Kitchens, *MD*

Definitions

OAB Is not a disease but a symptom complex: defined as URINARY URGENCY, USUALLY SEEN WITH FREQUENCY AND NOCTURIA, WITHOUT URGE INCONTINENCE

NO OTHER PATHOLOGY (UTI, TUMOR)

URGENCY: SUDDEN NEED TO VOID, HARD TO DEFER

FREQUENCY: OVER 8 VOIDS/DAY

NOCTURIA: OVER 1 VOID/NIGHT

URGE INCONTINENCE: SUDDEN INVOLUNTARY CONTRACTION OF THE BLADDER MUSCLE CAUSING LEAKAGE

Urinary Incontinence

URGE INCONTINENCE (OAB)

STRESS INCONTINENCE

MIXED INCONTINENCE

OVERFLOW INCONTINENCE

Impact of Overactive Bladder (OAB)

What's Normal?

VOID EVERY 3-4 HOURS

WAKE UP TO URINATE 1-2 X FOR OLDER PATIENTS

Prevalence of OAB in USA

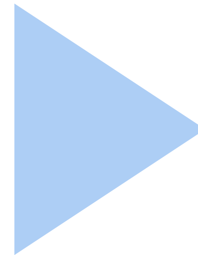
- 30 MILLION PEOPLE IN THE US
- 2 IN 5 WOMEN
- 1 IN 4 MEN
- AFFECTS QUALITY OF LIFE, WORK PRODUCTIVITY, MENTAL, MARITAL AND SEXUAL HEALTH
- CAN LEAD TO DEPRESSIVE ILLNESS

Coping Behaviors Used by Patients

- WEARING DARK CLOTHES TO HIDE WET SPOTS
- BATHROOM MAPPING
- TIMED VOIDING
- RESTRICTING FLUID INTAKE
- OTC MEDS
- PADS, ABSORBENT PRODUCTS

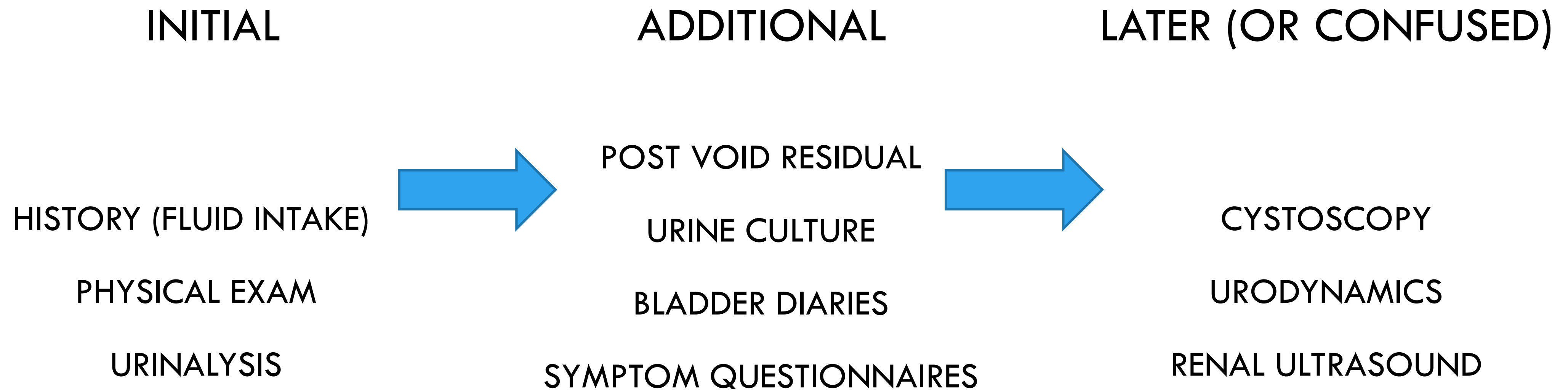
Yet, Takes a While to Tell MD/PA/NP

WETTING ON ONESELF SEEMS TO BE THE ONE FACTOR THAT DRIVES PATIENTS TO SEEK MEDICAL ATTENTION



THEREFORE IT IS OUR RESPONSIBILITY TO SCREEN OUR PATIENTS FOR OAB AND ASSESS DEGREE OF SYMPTOM BOTHER

Guidelines for OAB Workup



Comorbid Conditions

NEUROLOGICAL DISEASES

- Stroke
- MS
- SCI

MOBILITY DEFICITS

DM

FECAL MOTILITY DISORDERS

- Constipation
- Incontinence

Comorbid Conditions (cont.)

CHRONIC PELVIC PAIN

RECURRENT UTIS

PELVIC CANCERS

- BLADDER
- COLON
- UTERUS
- PROSTATE
- CERVIX

Differential Diagnosis of OAB

MEN: BPH, URETHRAL STRICTURE, BLADDER OUTLET OBSTRUCTION

WOMEN: PROLAPSE, ATROPHIC VAGINITIS

BOTH MEN/WOMEN: UTI, POSTSURGICAL INCONTINENCE, DIURETICS, NEUROGENIC BLADDER, BLADDER CANCER, INTERSTITIAL CYSTITIS, STRESS INCONTINENCE, DIABETES, RECENT PELVIC SURGERY

In 2019, There are Options!

4 LINES OF TREATMENT

- Initiating treatment presumes the patient can perceive an improvement in QOL (consider dementia, mobility; discuss with family)
- Most treatments will improve symptoms, but perhaps not eliminate them
- Depends on patient participation and persistence over time
- Risks and benefits need to be considered prior to starting any TX

First Line Therapy for OAB

Sometimes, no therapy chosen

BEHAVIORAL THERAPY

- TIMED VOIDING EVERY 3-4 HOURS
- DOUBLE VOIDING
- AVOID BLADDER IRRITANTS
  - CAFFEINE, CARBONATION, CITRUS, CIGARETTES, ALCOHOL, SPICY FOOD
- NO FLUIDS 4 HOURS BEFORE BEDTIME
- KEGEL EXERCISES OR PELVIC FLOOR MUSCLE THERAPY
- WEIGHT LOSS
- CAN BE COMBINED WITH OR WITHOUT PHARMACOTHERAPY

Second Line Therapy for OAB

ANTIMUSCARINICS

- TOLTERODINE, TROSPIUM, OXYBUTYNIN PILLS/CREAM/PATCH, FESOTERODINE, SOLIFENACIN, DARIFENACIN

Oral BETA 3 ADRENERGIC AGONISTS

- MIRABEGRON

COMBINATION THERAPY

- MIRABEGRON 25 OR 50 MG + SOLIFENACIN 5 MG

Antimuscarinics

Inhibits	Inhibits acetylcholine from binding to muscarinic receptors, therefore inhibiting detrusor contractions
Do not use	Do not use with narrow angle glaucoma (unless approved by opthalmologist)
Use	Use with caution in patients with impaired gastric and bladder emptying
Manage	Manage dry mouth and constipation

BETA 3 Agonists

Mimics the effect of norepinephrine, which binds to beta 3 receptors in the bladder, which stimulate detrusor relaxation and increase bladder storage and volume

Stimulates alpha 1 receptor in urethra which contracts sphincter muscle

Third Line Therapy

- When medical therapy is not effective (4-8 weeks)
- When medical therapy is costly
- When medical therapy causes intolerable side effects
- When patients do not want to be on medication

Majority of OAB Patients Do Not Resolve Treatment Goals

- 92% of patients do not meet their treatment goals
- Retrospective cohort study with 100,000 patients over 2 years
- Therefore, patients have usually stopped their treatment
- Important to urge and recommend follow up for patients as symptoms may not resolve

Antimuscarinic Discontinuation Rate

2/3 of patients stopped taking antimuscarinics at 6 months

But 1/3 of these patients seek treatment after 2 years

Treatment goals need to be met

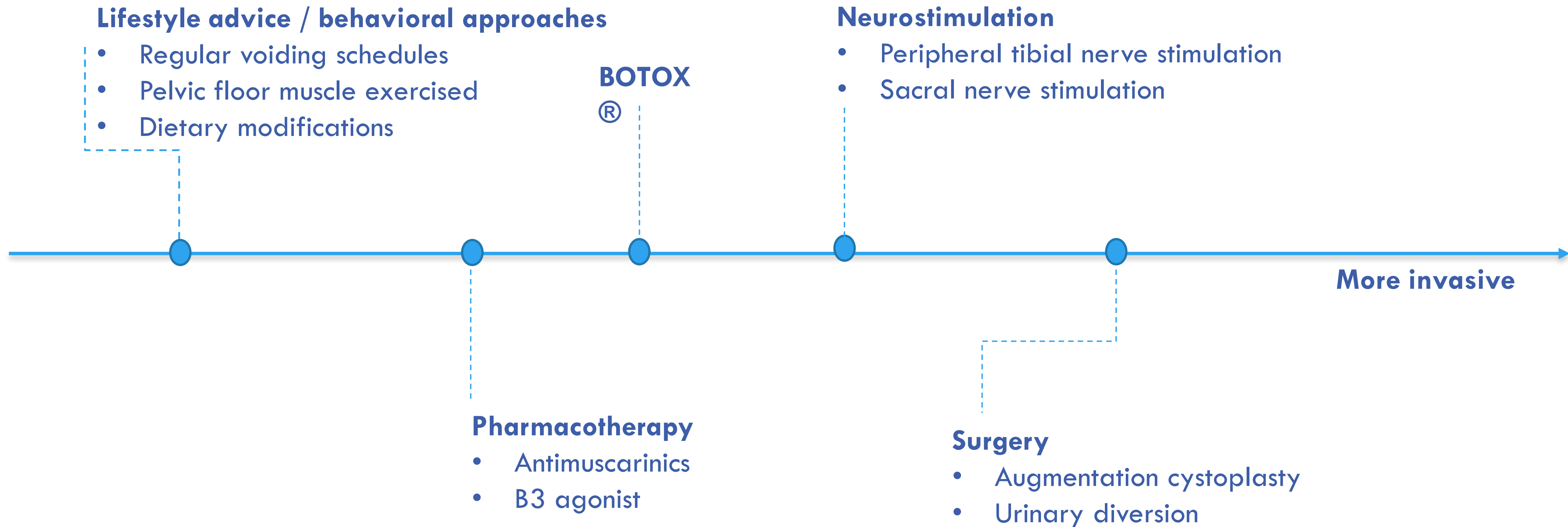
Third Line Treatments

Intradetrusor onabotulinumtoxin
a

Peripheral tibial nerve modulation

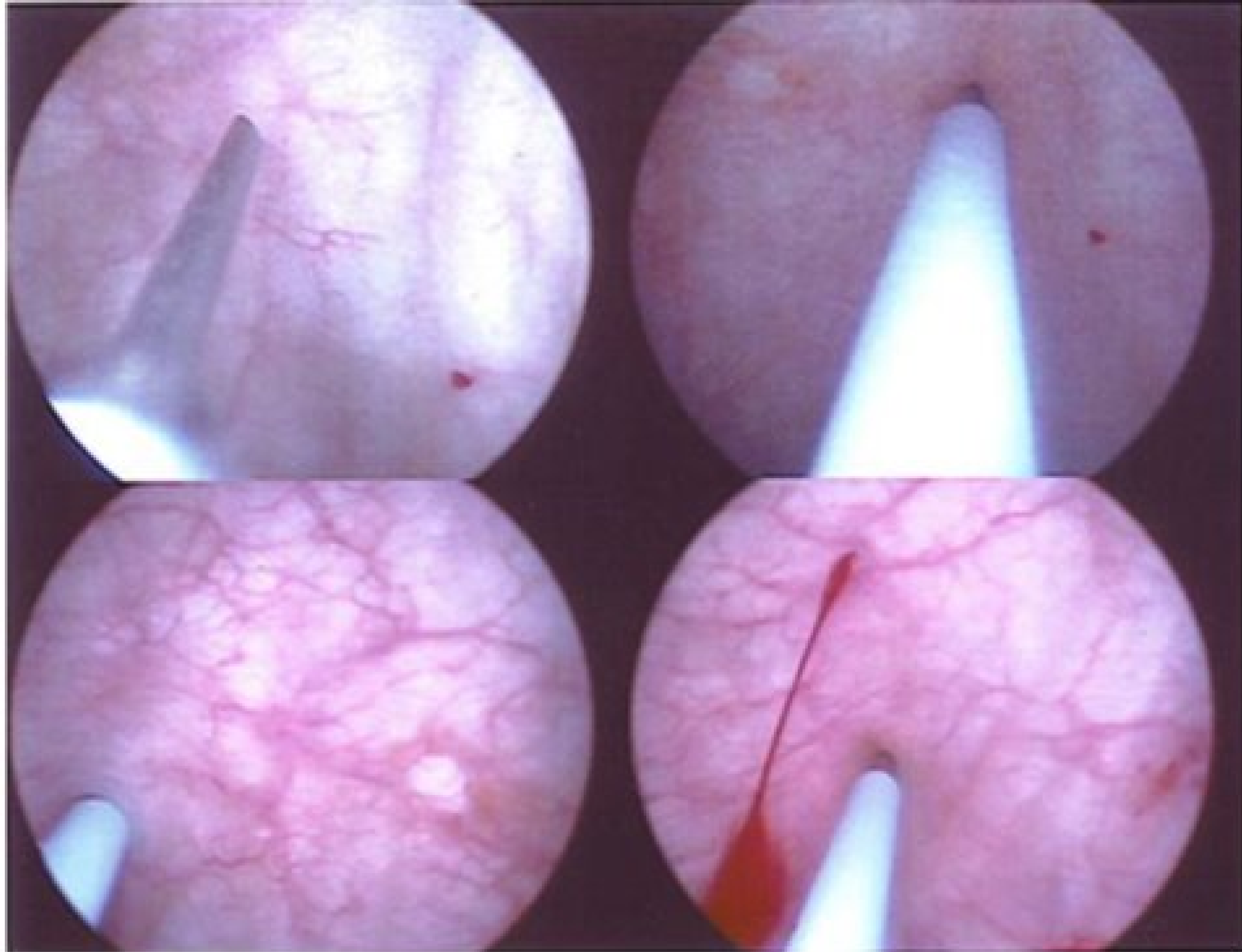
Sacral neuromodulation

Summary of Spectrum of Treatment for OAB



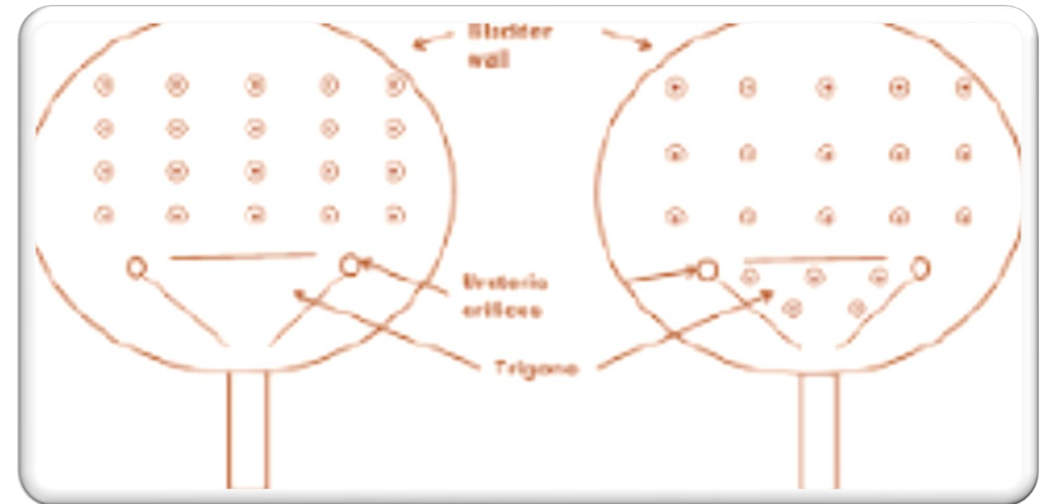
Botox (onabotulinumtoxinA)

- INHIBITS ACETYLCHOLINE SO REDUCES DETRUSOR CONTRACTIONS, WHICH REDUCED INCONTINENCE AND INCREASES BLADDER CAPACITY
- CAUSES TEMPORARY MUSCLE PARALYSIS OR WEAKNESS
- CAN TAKE 6 WEEKS TO TAKE EFFECT
- CAN LAST FOR 10 MONTHS, VARIES



Botox

- FDA approved indication
- 100 U or 200 U are injected 1 mL /site separated by a distance of 1 to 1.5 cm.
- 10, 15 or 20 sites



Is Botox Safe?

- Despite potency, Botox is highly specific for peripheral nerves and **does not spread** from its site of local injection in significant quantities
- Toxicity extremely rare
  - Higher dose
  - More common with other disease states
    - AML
    - Myasthenia Gravis
  - Signs are impaired vision, extremity weakness, dysphagia

Complications of Botox

- Retention (5-6%)
  - Temporary
  - MORE RISK IN NEUROLOGICALLY IMPAIRED
  - May need to self catheterize
- UTI
  - Check urine culture 7-10 days before procedure date

Botox Fun Facts

100% medicare patients coverage

80%-90% commercial coverage

No down time

In office procedure but can be done under sedation

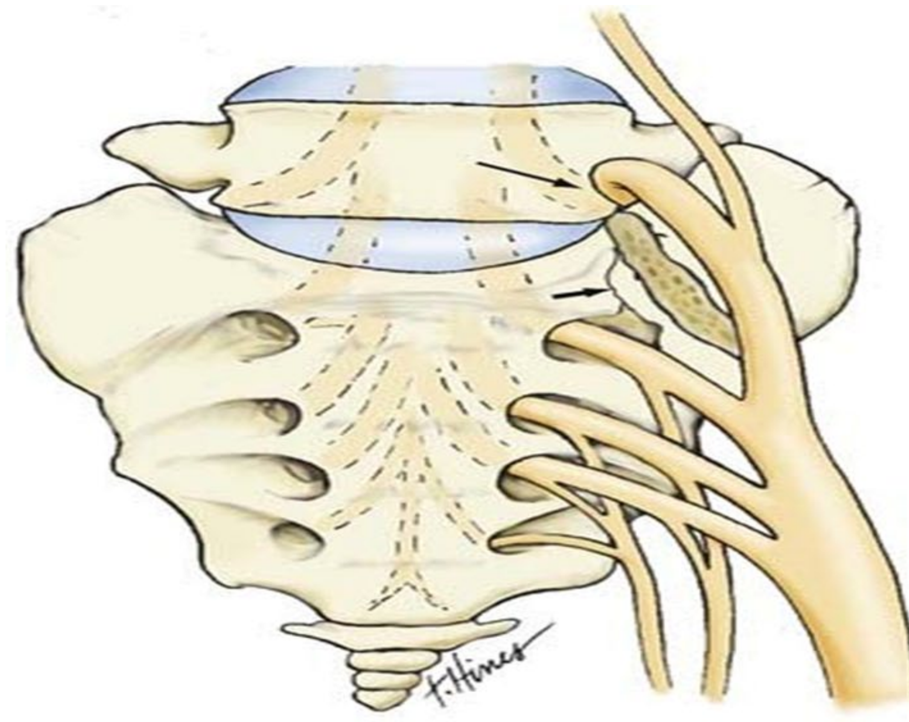
Effective for men and women (neurogenic and idiopathic)

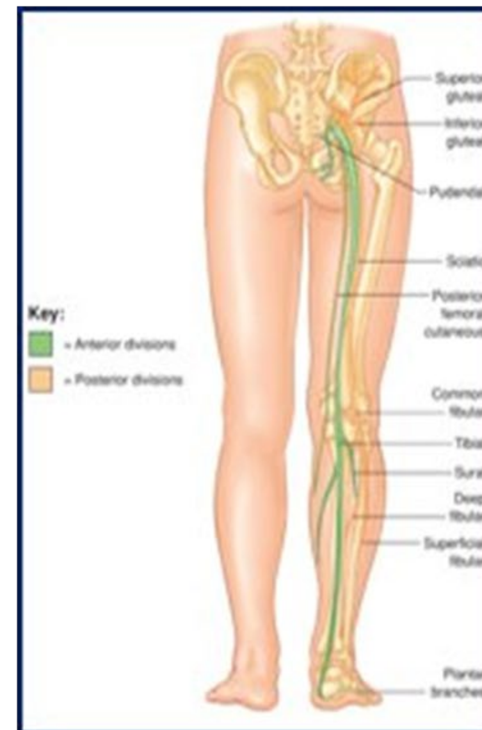
PTNM: Percutaneous Tibial Nerve Modulation

PTNM delivers electrical pulses to stimulate the afferent fibers of the tibial nerve that extend to the sacral nerve plexus

PTNM is thought to restore bladder function by modulating the bladder and Central Nervous System (CNS) Pathway IN A GRADUAL FASHION

Pertinent Anatomy for PTNM





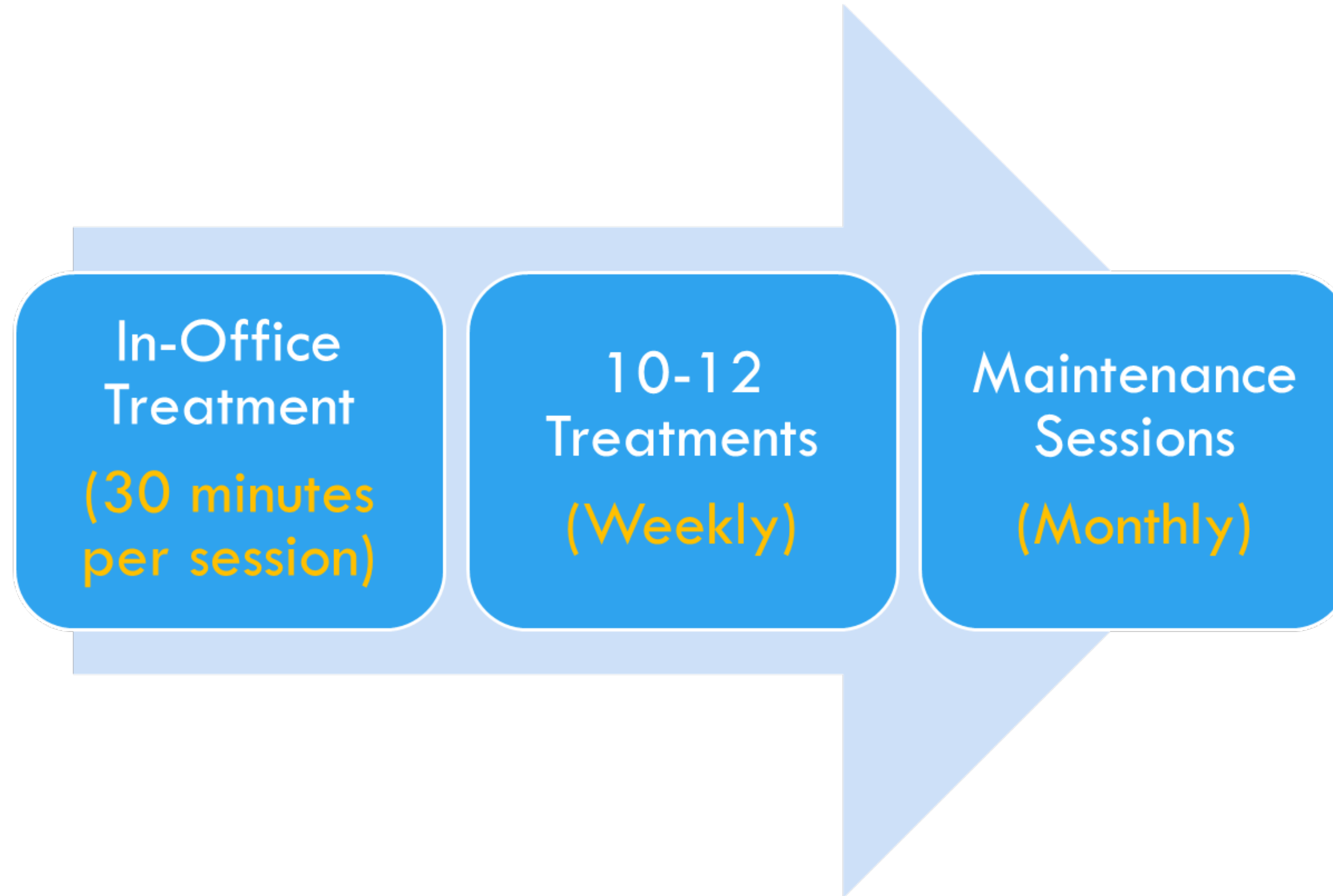
How PTNM is Performed

- Proper needle placement is **critical** for effective therapy!
- **Location**: 3 finger breadths from medial malleolus, 1 finger breadth posterior
- **Angle of THE 30 GAUGE needle**: Cephalad, 60˚
- **Depth**: 2 cm (~½) of the needle inserted into leg

When to Use PTNM

- Offer to patients with bothersome OAB symptoms desiring treatment after behavioral treatment and medications fail
- Do **NOT** use on:
  - Patients with pacemakers or implantable defibrillators
  - Patients prone to excessive bleeding
  - Patients with nerve damage that could impact either percutaneous tibial nerve or pelvic floor function
  - Patients who are pregnant or planning pregnancy
  - if skin in the area of use is compromised

What Patients Should Expect



Complications of PTNM

- Adverse events are typically temporary
- Mild pain
- Minor inflammation
- Bleeding near treatment site

Outcomes of PTNM

55% of patients reported “moderate” or “marked” improvement in symptoms

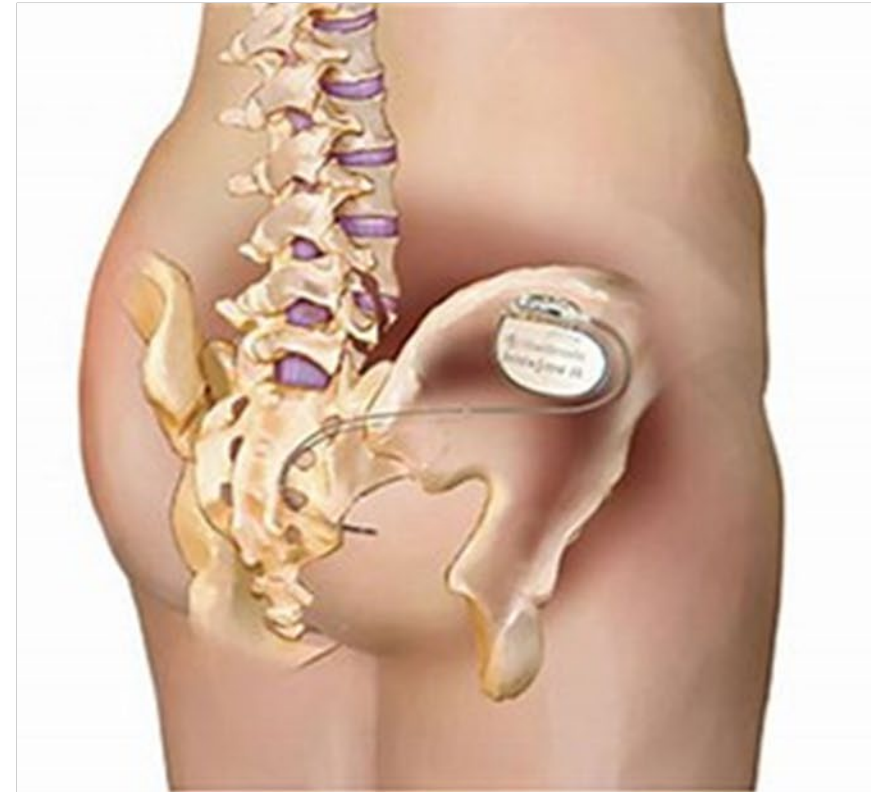
77% of responders had long-term, sustained efficacy at 3 years

Interstim Sacral Nerve Neuromodulation

Stimulation of S3 nerve to reregulate bladder function

Electrically stimulates the sacral nerve which is thought to normalize neural communication between the bladder and brain and between the bowel and brain

Interstim Sacral Neuromodulation



Interstim: Anatomy

Management of Refractory OAB

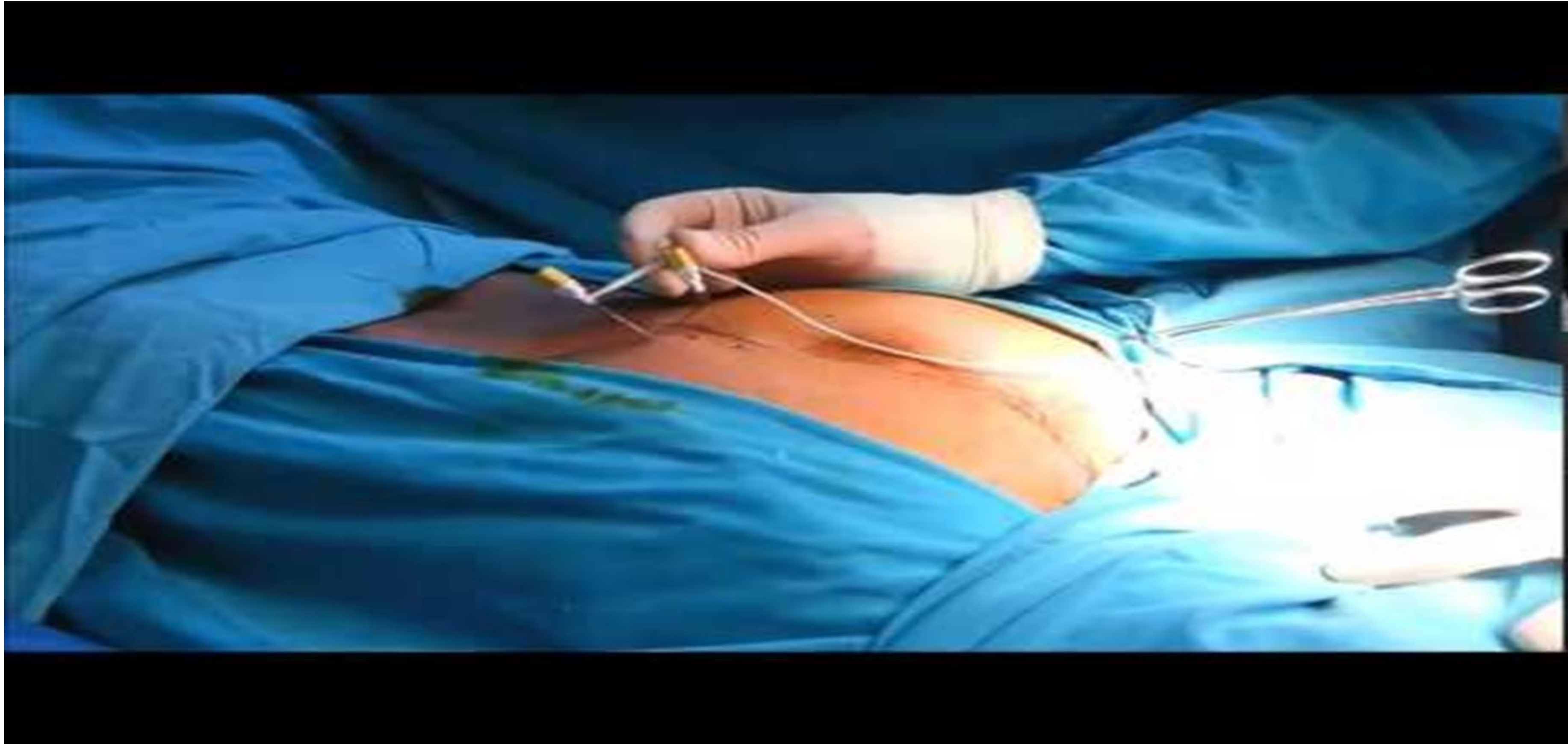
Interstim

Neurostimulator

Long-Term Lead

Interstim™ has evolved from a large cut-down procedure over the sacrum to a less invasive percutaneous tined lead approach

Interstim Sacral Neuromodulation



Indications for Interstim

Refractory urinary frequency, urgency, urge incontinence

Fecal incontinence

Urinary retention in men and women

Complications of Interstim

- Wound infection
- Malfunction of device
- Battery dead
- MRIs are contraindicated

Fourth Line Treatments

- Indwelling foley
  - UTIs
  - Erosion
  - Stones
- Augmentation cystoplasty
  - Risk of malignancy
  - Need to catheterize

The patient is the reason why we are here

02

Their goals and expectations are important

03

Our responsibility is to help meet their goals

THANK YOU

Rupa Kitchens, M.D.
rkitchens@urologyal.com