

# Office Urology

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# Introduction

- Urological complaints are a common part of clinical practice this discussion seeks to elucidate these readily distinguishable and treatable complaints.
- What are they?

# Topics of Discussion

- Hematuria
- Proteinuria
- Frequency
- Dysuria
- Incontinence

# Hematuria

- Gross or microscopic?
- What are the associated symptoms if any? (dysuria, frequency, urgency, foul malodorous urine, abdominal pain, incontinence, dysuria, incomplete voiding, Chemical irritants, urethral or vaginal discharge, pruritis)
- Is the hematuria real? (pseudohematuria)
- Office microscopic urine analysis?

# Pseudo-hematuria DDX

- Food dyes, beets
- Rifampin
- Pyridium
- Urates
- Myoglobinuria
- Hemoglobinuria
- Menses

# Hematuria DDX

- Infectious (Pyelonephritis, cystitis, urethritis, prostatitis, septic emboli)
- Acute febrile illness
- Nephrolithiasis (pelvic, ureteral, bladder)
- Glomerulonephritis ( PSGN, Membranoproliferative, SLE, Crescentic, Goodpastures, Rheumatoid, Wegeners Glomerulomatosis)
- Neoplasms ( Bladder, Renal, lymphoma, leukemia, PCKD)
- Trauma
- Coagulopathy
- Malignant hypertension or hypotension
- Vascular ( RAS, Renal vein thrombosis, Thromboembolic, Sickle cell trait or disease)
- Interstitial nephritis
- Analgesic nephropathy, CTX, anticoagulants,
- Exercise

# Hematuria DDX

- Nonurinary tract causes
- Neoplasms of adjacent organs
- PID, Diverticulitis, Appendicitis, Endometritis, Peritonitis
- IBD

# Proteinuria

- Quantity?
- Association with frequency or polyuria, dysuria, frequency, urgency, etc.?

# Benign Proteinuria

- Fever
- Exercise
- Orthostasis
- Contrast dye

# Non Nephrotic range proteinuria

- Pyelonephritis
- TB
- Interstitial Nephritis
- ATN
- Nephrolithiasis
- Malignant Hypertension
- Urinary Tract neoplasms
- PCKD
- Trauma
- Hereditary nephritis
- Glomerular Nephritis

# Nephrotic range proteinuria

- Minimal Change disease
- Glomerulonephritis
- Glomerulosclerosis
- D.M.
- Amyloidosis
- Neoplasms ( Mets, myeloma, leukemia, lymphoma)
- Sarcoidosis
- Thyroid diseases (graves,myxedema)
- Sickle cell disease

# Nephrotic range proteinuria

- Toxins, drugs, vaccines
- Allergens
- Systemic or other serious infections
- CHF
- Valvular/Structural disease causing right sided congestion
- Preeclampsia
- Morbid Obesity
- Renal vein/Vena cava thrombosis
- Alports syndrome

# Dysuria

- UTI
- STD (Urethritis)
- Vulvovaginitis/Atrophic vaginitis
- Prostatitis
- Mechanical/Chemical irritation
- Allergic reaction
- Bladder outflow obstruction
- Tumor
- Sexual Abuse

# Laboratory Evaluation

- UA (repeat), UC&S
- Office Urine Microscopy
- 24 hour Urine collection
- Post void urinary catheterization
- CBC
- Bun/Cr
- CPK
- Albumin, Total Protein, LDH, Bilirubin (D/I)
- PSA/PAP
- Urine eosinophils
- ANA, ESR, RF, C3, C4, CH50

# Special Testing

- Renal Ultrasound
- Renal Scan
- IVU, Voiding cystourethrogram
- CT
- Angiography
- Cystoscopy
- Biopsy

# Incontinence

- Involuntary loss of urine so severe as to have social and hygienic consequences
- 30% of the elderly
- 50% of N.H. patients
- Stigma

# Incontinence

- H&P including endocrinology, neurological, malignancy, surgery, parity, meds, pattern of voiding, bowel habits, sexual function, menopausal, voiding record, Neurological exam, mini mental status exam, abdominal exam, valsalva maneuver, rectal exam

# Incontinence

- Stress Incontinence
- Urge Incontinence
- Overflow incontinence
- Functional Incontinence

# Stress incontinence

- Urine loss during activities that increase intra-abdominal pressure caused when intravesicular pressure exceeds urethral sphincter pressure
- Kegel exercises, alpha agonists to increase smooth muscle tone at bladder outlet, Tricyclic antidepressants decrease detrusor activity contractility and increase outlet resistance, estrogen improves bladder tone
- Surgery for women with pelvic prolapse including bladder neck suspension and urethral sling procedures.

# Urge Incontinence

- Detrusor muscle irritability resulting in sudden urge that exceeds ability of urethral sphincter to maintain control resulting in leakage of urine.
- Chronic cystitis, infiltrative diseases, CNS lesions
- Bladder training, direct acting smooth muscle relaxants, anticholinergics, calcium antagonists, ERT

# Overflow incontinence

- The bladder is unable to empty normally resulting in the bladder becoming over distended and resulting in urine loss.
- Most common bladder outlet obstruction, BPH
- Crede maneuver or valsalva, alpha blockers to reduce sphincter tone, cholinergic agents to improve detrusor contractility
- Finasteride
- TURP, TUIP, TULIP

# Functional incontinence

- Non-urinary tract causes of incontinence

# DRIP

- Reversible incontinence
- Delirium, Dementia, Depression
- Restricted Mobility, Retention
- Infection, inflammation (atrophic vaginitis), impaction
- Pharmaceuticals, Polyuria (glucosuria, CHF)