

OBSTRUCTIVE UROPATHY

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Definition:

- Functional or anatomic obstruction of urine flow at any level of the urinary tract.
- Point of obstruction can be at the calyces all the way to the urethra.
- Also defined as the damage caused from obstruction.

Causes:

- Congenital or acquired
- Partial or Complete
- Unilateral or Bilateral
- Acute or Chronic
- Benign or malignant.

Results in renal damage pathologically-

A) Congenital Causes:

- i) Posterior urethral valves
- ii) Aberrant Renal Artery
- iii) Prune Belly syndrome
- iv) Congenital mega ureter

I) Posterior urethral valves

Presents at birth with failure to pass urine or difficulty.
Can be diagnosed intrauterine or after birth by
Sonography or MCU

Treatment

1. Catheterisation and then cystostomy
2. At 2years by valves excision cystoscopically.

II) Prune Belly syndrome and congenital mega ureters.

- Failure of ureteral peristalsis
- Results in back pressure and hydro ureters
- Can be diagnosed by ultrasonography

Treatment is by doing ureteral cutaneous procedure.
Has poor prognosis.

III) Aberrant Renal Artery

- Causes obstruction at pelvic ureteric junction (PUJ)
- Can be discovered early or late.
- Can cause hydronephrosis

Diagnosed by U/S or CT-Urogramme

B) Acquired Causes

- Calculi Disease
- Can occur at different levels. Commonest cause of obstruction
 1. Kidney
 - Calyceal or at pelvis
 - Staghorn stone

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2. Ureteric

- Proximal, Mid or distal
- Can cause VUJ or PUJ obstruction

3. Bladder Calculi

- Can block internal meatus or occupy the whole bladder

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Symptoms' Vary:

- Colicky Pain
- Haematuria
- Frequent infection

Investigation:

- Urinalysis
- Ultrasound
- Non contrast enhanced Helical CT-Scan.
- Plain X-ray

Treatment:

Depends on the level.

- Modalities:
- Antibiotics
- Diuresis
- Antispasmodics
- Lithotripsy
- Litholopaxy
- Percutaneous nephrolithotomy
- Open procedures

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Stricture of Ureter

- Iatrogenic
- Traumatic

Injury during surgery e.g.

A.P R section

Caesarian sections

TAH

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Other pelvic procedures and pelvic tumors

- Easy to detect if bilateral
- Discovered late if unilateral
- Diagnosed by CT-Urogramme or IVU
- Treated by re-implantation or other operative procedures.

Bladder Pathology

- Neurogenic bladder
- Bacterial cystitis
- TB
- Parasitic cystitis
- Chronic can cause calcification of bladder wall resulting in VUJ

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- Chronic can cause calcification of bladder wall resulting in VUJ
- Treatment
- Ureteric Reimplantation
- TB treatment
- Schistosomiasis treatment with praziquantel
- Neurogenic bladder-Treat the aetiology or divert the urine e.g. in spina bifida or paraplegic patient.

Urethral obstruction

Prostatic Diseases:

- Benign prostate disease
Diagnose by
- Physical Examination
- Blood Investigation
- Urinalysis
- Imaging-U/S and CT-Scan

Treatment

- Drugs
- Operative procedures

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Prostate Carcinoma

- Investigate
- Treat according to symptoms, stage and age.

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Bladder Tumors.

Symptoms

Types-Transitional cell Ca

- Squamous cell Ca

- Adeno carcinoma.

Treated according to type and stage.



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Kidney Tumors

- Renal cell Ca
- Squomus cell Ca at the pelvis

Urethra stricture

Aetiology

- Infections
- Trauma
- Iatrogenic

Investigations

- Urinalysis
- Blood
- Imaging

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Treatment

- Cystourethroscopy
- Urinary Diversion
- Urethroplasty
- One stage
- Two stage
- Substitution Urethroplasty

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Unilateral Obstruction

- May take time to be known.
- Compensated by the opposite kidney.

Bilateral Obstruction

- Commonest cause is calculus
- Effects if not relieved leads to total renal failure in two weeks

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-Investigation about function by radionuclide renal scan:

- DTPA
- DMSA
- Shows percentage activity of the kidney
- Cut off mark for adults is 10%
- Cut off mark for children is 20%

-Acute kidney failure may require no dialysis if compensated.

-End stage renal disease (ESRD) requires transplant or permanent dialysis.