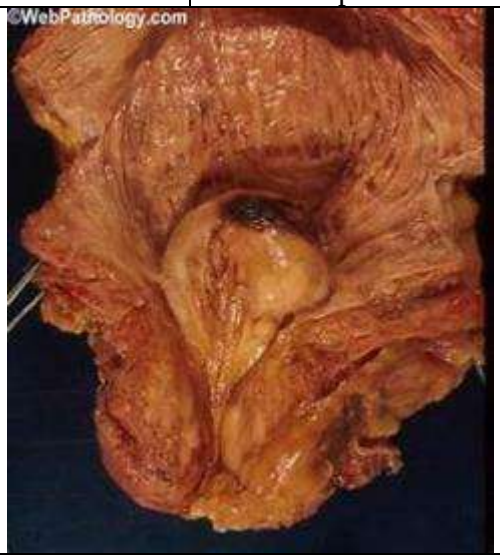
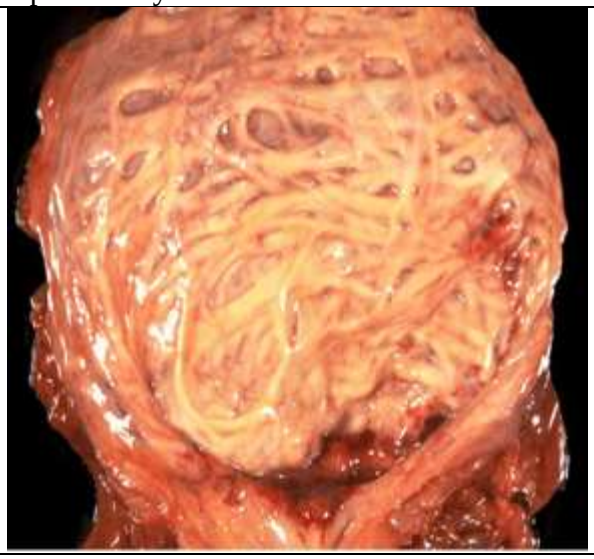
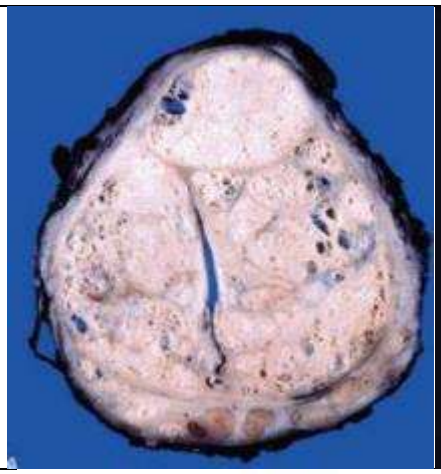
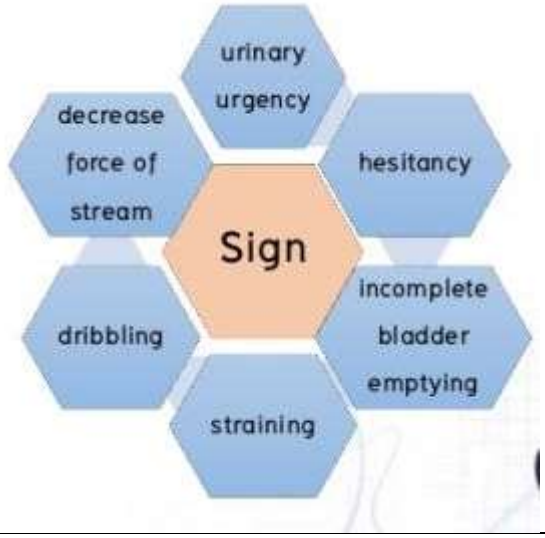
XX. Diseases of the Male Genital System

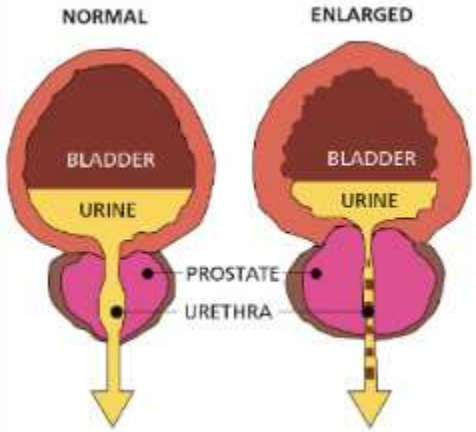
Nodular Hyperplasia of prostate IV- 7. 700	
Urinary bladder:	• Is enlarged • Hypertrophied (thick-walled) • Shows evidence of cystitis (acute and chronic) • Lined by prominent muscular bands (projecting into mucosa as ridges) • Shows scattered petechial haemorrhages
Prostate:	• Is moderately enlarged • Uniform (median) • One lobe is more affected • Fairly firm-elastic in consistence
The median lobe:	• Is protruding into the urinary bladder • Has obstructed the internal urethral orifice by elongation and distortion • Shows nodular external surface • Is nodular-like (on cut-section) • Embedded in a greyish framework • Round or ovoid • Solid in appearance (in general) • Irregular and sponge-like (in some parts) • Elastic cystic in other parts) • Pale yellowish-whitish in colour • On pressure, a turbid pale yellow fluid is emitted from the cut surface
Prostatic urethra:	• Is compressed antero-posteriorly











N.B.:

- In senile hyperplasia of the prostate, the enlargement may involve any part except the posterior lobe (to be differentiated from carcinoma).
- Two lateral lobes or/and a middle lobe are usually formed. –

Hypertrophy of lateral lobes:

1. Compresses the urethra.
2. The slit-like urethra herniates in bladder.

Hypertrophy of posterior commissure:

1. *Produces an anatomical middle lobe.*
2. Elevates the posterior vesical lip.

Hypertrophy of subcervical lobe:

1. Projecting mass in the lumen of the urethra, then through the internal sphincter.
2. Pedunculation.

Senile Hyperplasia (So-called benign prostatic hypertrophy)

Prostate:	• Is enlarged (moderately) • Shows hypertrophy of the two lateral lobes • Is diffusely nodular • The enlargement is confined within the capsule • No gross evidence of malignancy

N.B.1:

Effects of senile enlargement of the prostate on :

***I. Prostatic urethra*:**

1. Distortion.
2. Elongation.
3. Compression or/and tortuosity.
4. Obstruction

II. Urinary bladder:

1. Retention-overflow.
2. Constant dribbling of urine.
3. Incomplete evacuation due to:
    (a) Ball-valve action of middle lobe. L
    (b) Elevation of urethral orifice above the level of the bladder floor.
    (c) Lifting up of the urinary outlet by the growing process
    (d) Dilatation or/and stretching of the vesical sphincter.
4. Cystitis.
5. Hypertrophy or/and dilatation.
6. Ribbed appearance (due to thick trabeculae of the muscle bands
7. Pouching and false diverticulae.
8. Predisposition to Phosphatic calculi.

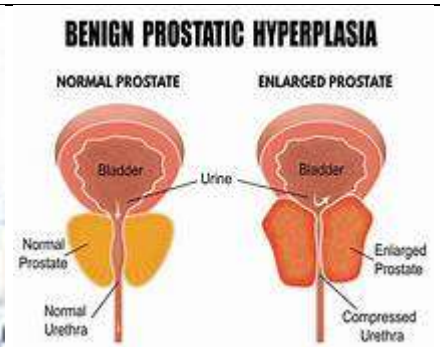
III. Ureters and renal pelvis:

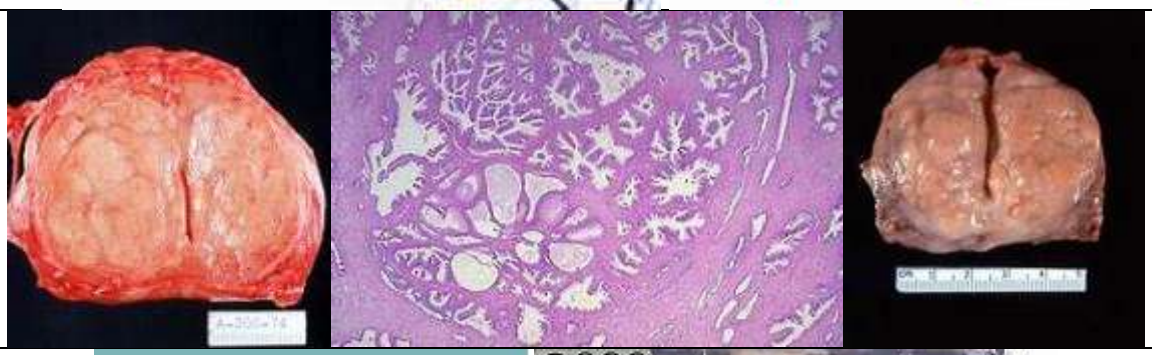
- Dilatation (bilateral).

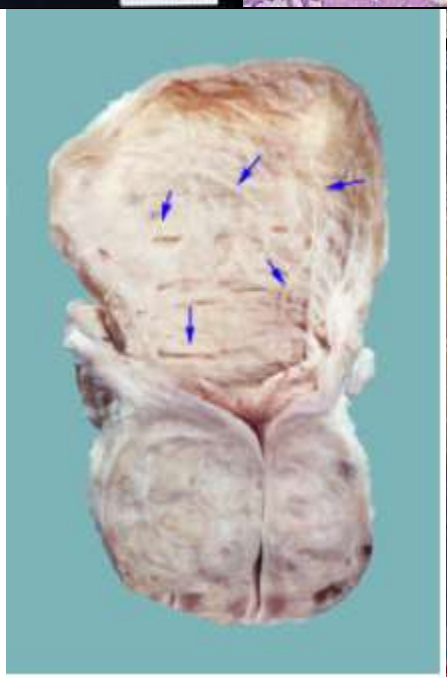
IV. Kidneys:

1. Hydronephrosis (bilateral).
2. Infection (bilateral):
    a. Pyelonephritis.
    b. Pyonephrosis.
3. Renal insufficiency and uraemia.

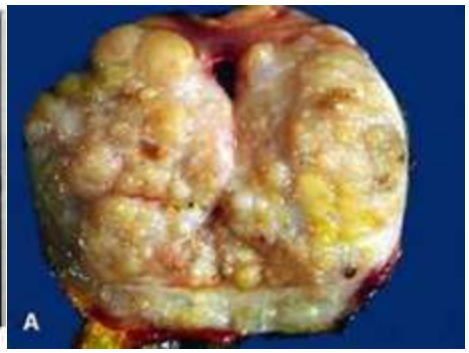

urethral resistance
Grey white
Nodular hyperplasia
Weight between 60 – 100 g.


BENIGN PROSTATIC HYPERPLASIA
NORMAL PROSTATE
ENLARGED PROSTATE
Bladder
Urine
Bladder
Normal Prostate
Enlarged Prostate
Normal Urethra
Compressed Urethra






Patient 2 25 min IVU
Patient 3 Coned down bladder view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Nodular hyperplasia of the prostate gland, also **benign prostatic hyperplasia** (abbreviated **BPH**), is a common benign pathology of the prostate gland.

- It is also known as **prostatic nodular hyperplasia**.
- Occasionally, it is referred to as **benign prostatic hypertrophy**; this is a misnomer. This pathology is *not* a hypertrophy.

General

- Very common.
- Incidence increases with age.

Clinical - mnemonic I WISH 2p:

- **I**ntermittency.
- **W**eak stream.
- **I**ncomplete emptying.
- **S**training.
- **H**esitancy.
- Post-void dribbling.
- Prolonged voiding.

Others:

- Hematuria - common.

Treatment:

- Medications.
- Transurethral resection of the prostate (TURP).

Gross

- Enlargement of the prostate.
- Nodularity of the prostate.

Microscopic

Features:

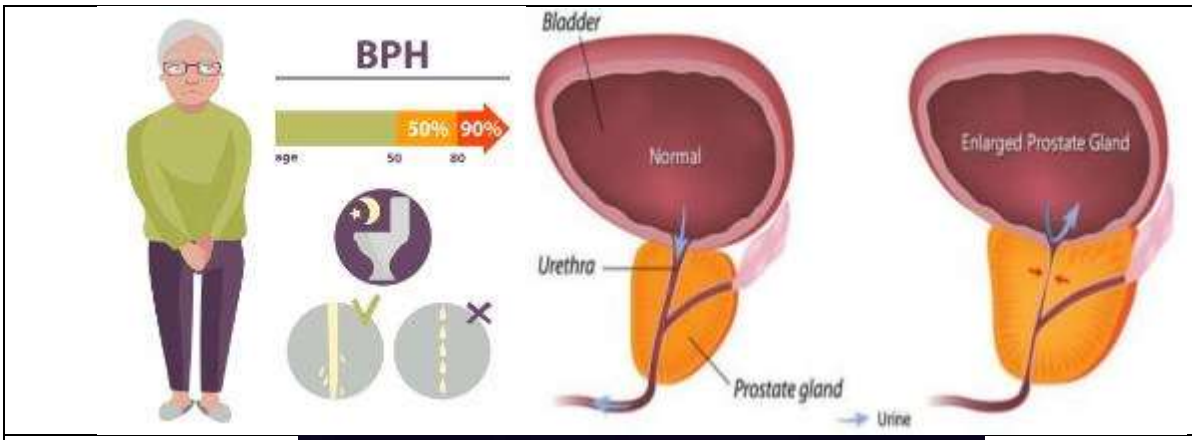
- Stromal and/or glandular hyperplasia.
    - Stromal component has small blood vessels.

Notes:

- Should **not** be diagnosed on core biopsy!
- One series suggests clinically relevant prostate cancer is seen in ~1.5% of resections for BPH.[3]

DDx:

- Urothelial carcinoma - significant nuclear atypia.
- Prostate carcinoma - especially low-grade.
- Smooth muscle tumour of uncertain malignant potential - lacks small vessels.


BPH
50%
90%
age
50
80
Bladder
Normal
Urethra
Prostate gland
Urine
Enlarged Prostate Gland