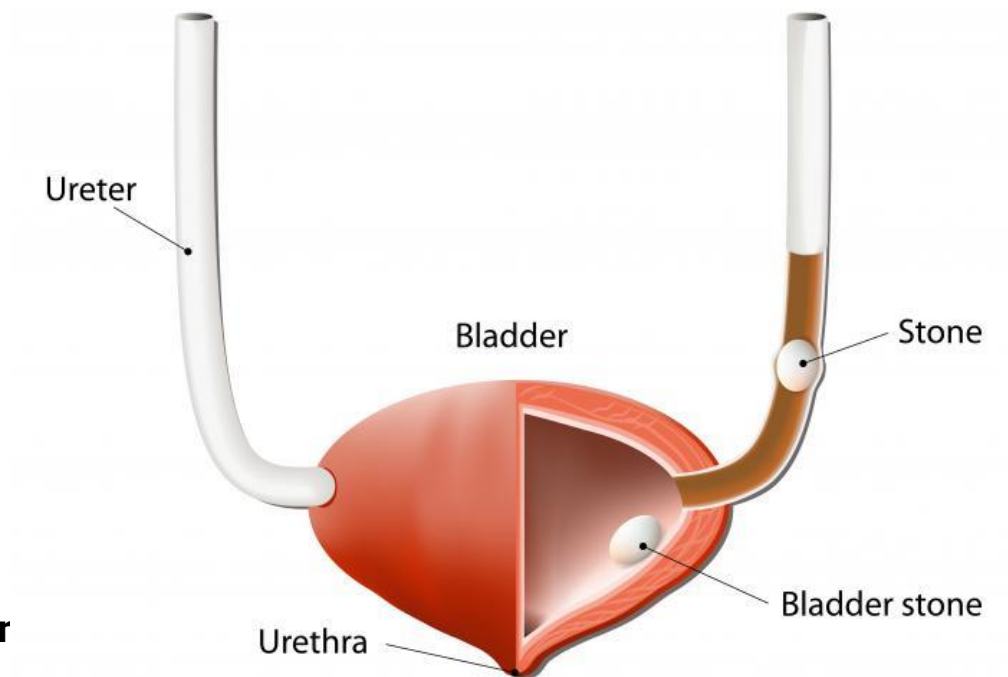


Urinary Bladder Stone

Bladder



BLADDER STONE



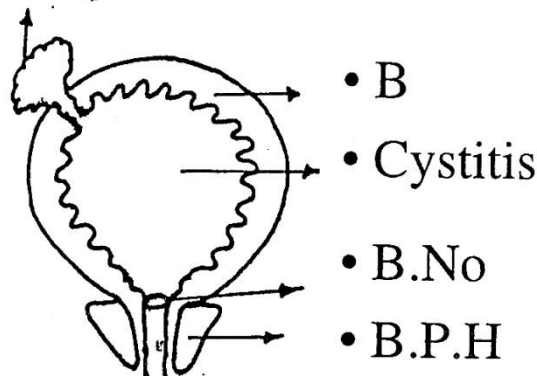
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Urinary Bladder Stone

- The most important is vesical outlet obstruction with residual urine and infection due to B.P.H or B.N.O.
- They are also common in Bilharziasis , cystitis and bladder diverticula.

- **Diverticulum**



*** Stone Bladder ***

★ **Pathology :**

- Mechanism of stone formation & types of urinary stones
(as before in the general principles)

★ **Complications :** (as before in the general principles)

★ **Clinical picture :** (as before in the general principles)

- **Characteristic features :**

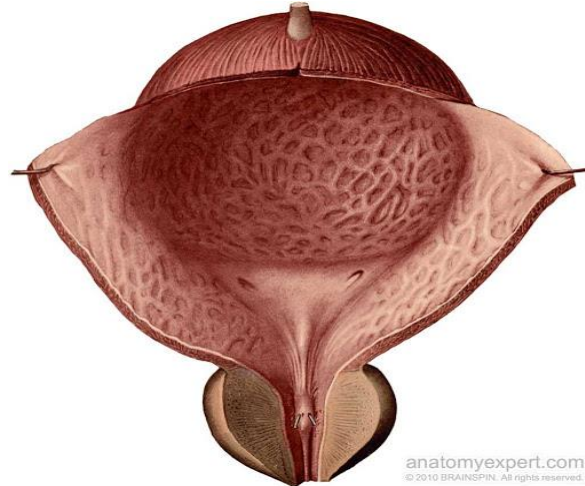
1- Frequency: is the **earliest** symptom, occurs **early** more by **day** due to irritation of the trigone & occurs late by **day and night** due to cystitis.

2- Bladder pain :

- Dull aching, in the suprapubic region radiating to the tip of penis or clitoris & perineum. (S₂₋₄ spinal cord segments receive sensations from urinary bladder and give pudendal nerve which receive sensations from penis & perineum)

Urinary Bladder Stone

- **Increasing by** day during standing, setting, movements or at the end of micturation
- It is due to **irritation of trigone** or contraction on the stone.



3- Terminal haematuria due to contraction of the bladder on the stone . (D.D. from Bilharziasis)

4- Difficult micturation: In the form of interrupted stream or acute retention (the stone blocks the internal meatus)

5- Manifestations of the **cause** eg. B.N.O, B.P.H. or stricture urethra.

6- Huge stone may be felt bimanually on **P-R or P-V exam.**

★ **Investigations :** (as before in the general principles)

- Plain X-ray show radio-opaque stones in the pelvis.



★ **D.D :**

1-Other causes of haematuria .

2-Other causes of frequency of micturation .

★ **Treatment :**

A-Conservative treatment: (as before in the general principles)

B- Instrumental treatment:

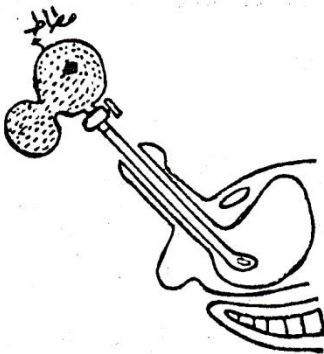
• **Indications :** stones less than 2 cm.

▪ **Methods:**

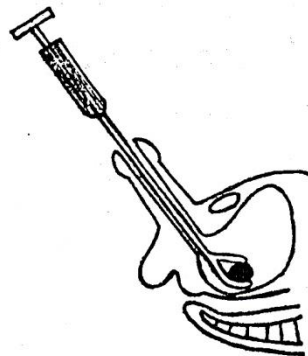
- The stone is crushed cystoscopically either by lithotrite (the technique is called litholapaxy) or by ultrasonic, laser or electrohydraulic lithotripsy .
- Cystoscopically , the fragment are washed outside the

*** ttt Of Bladder Stone ***

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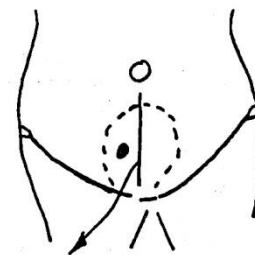


• Biglow's Evacuator



• Litholapaxy

Cystolithotomy



• Supra-pubic incision

C-Surgical:

▪ **Indications:**

- Failure of instrumental treatment .
- Stone larger than 2cm .
- Multiple stones .
- Stone in diverticulum .

Urinary Bladder Stone

➤ Associated pathology requiring surgery.

▪ **Method:**

- **Cystolithotomy** in which the bladder is opened , through a midline suprapubic incision or Pfannenstiel's (transverse) incision , to remove the stone.

