TREATMENT OF URETERAL CALCULI

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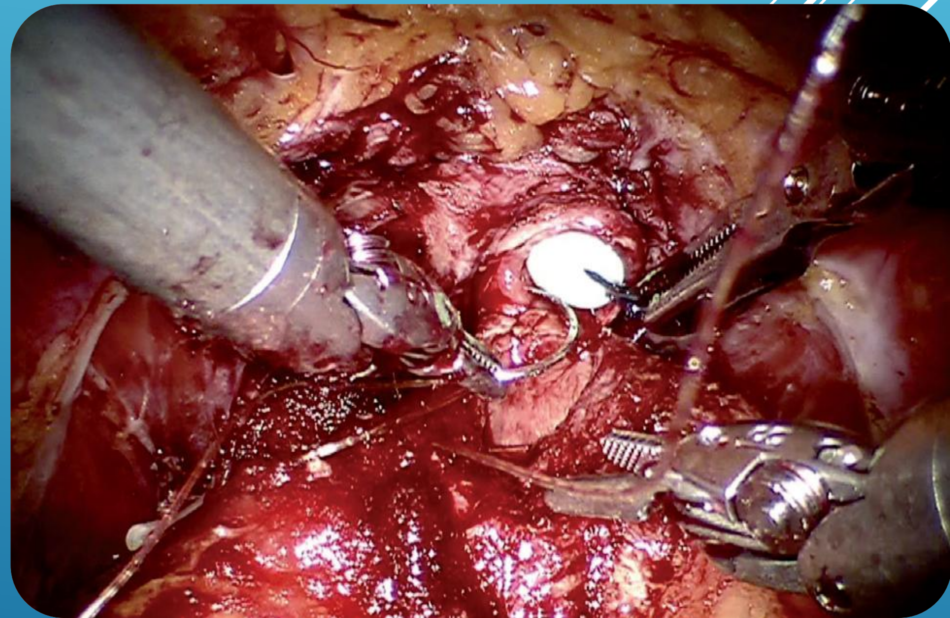
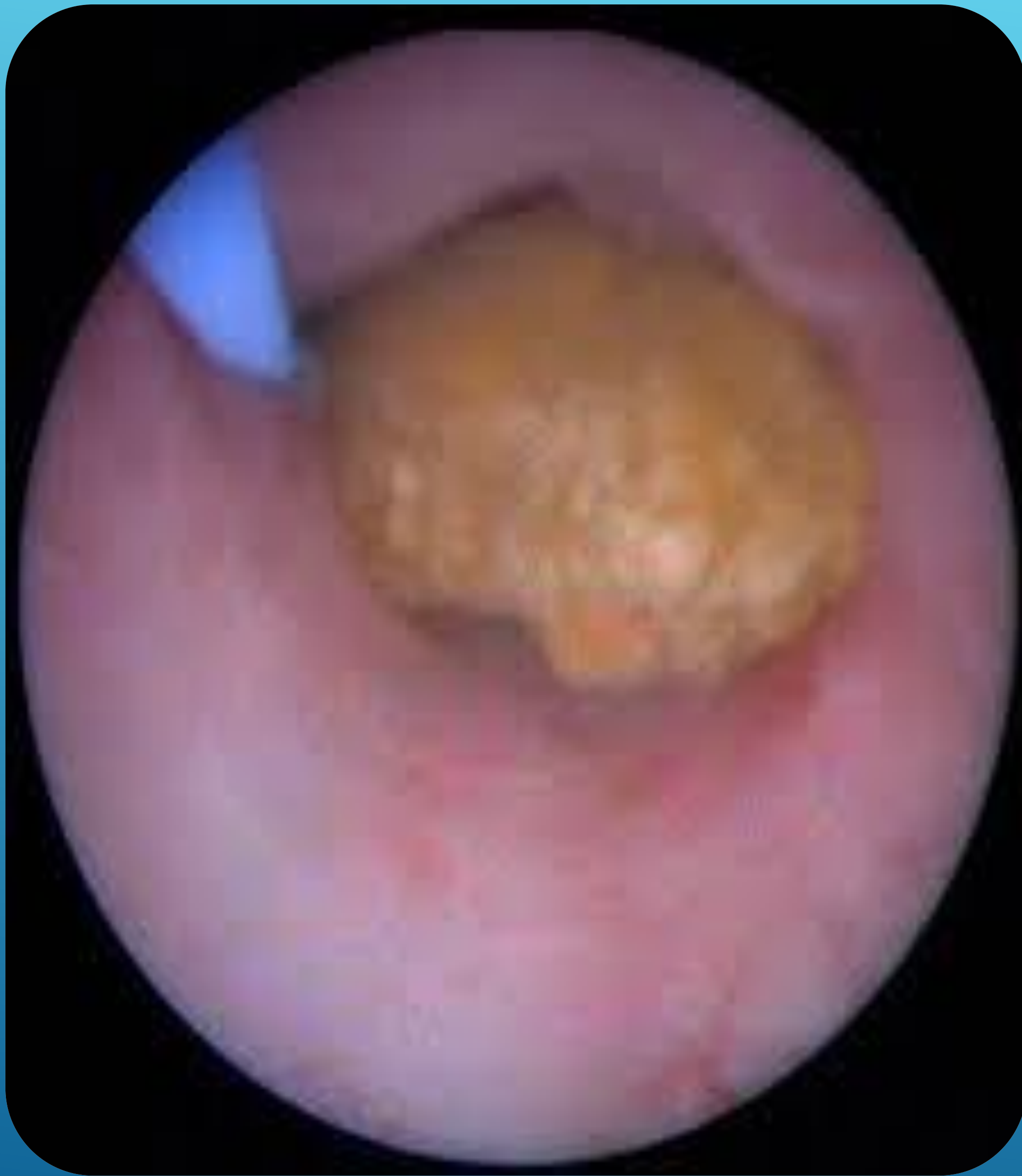
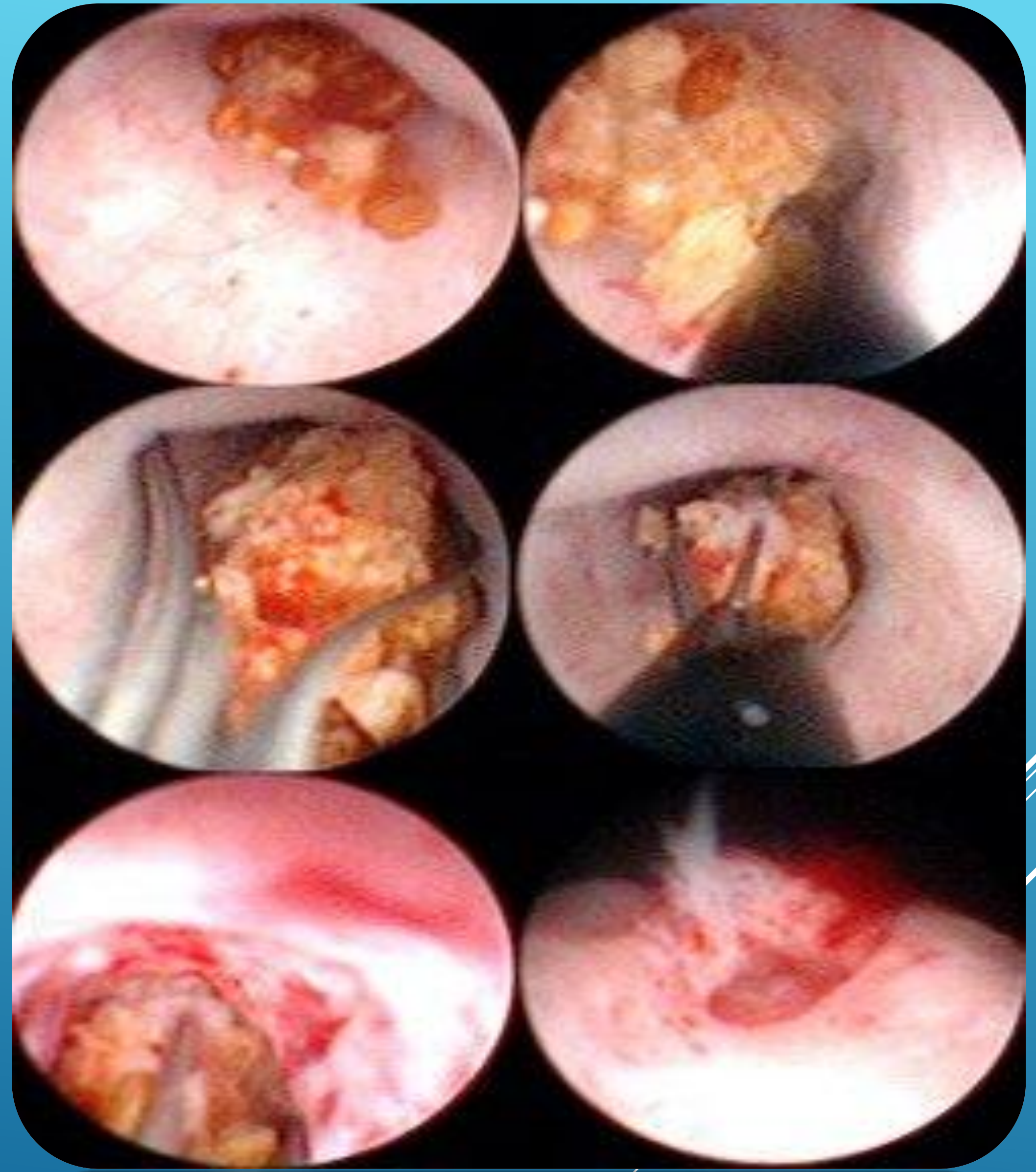


OBJECTIVES

At the end of the lecture, the students should be able to:

1. Identify the main risk factors for urinary calculi formation & how the stones are formed.
2. Know the types of urinary calculi
3. Diagnose the condition (Hx, Physical examination, investigations, & imaging)
4. Know different methods of TRT & recognize those patients with urinary calculi who need urgent intervention.
5. Know the complications of urinary stones.
6. Know how to prevent stone recurrence

1-SPONTANEOUS PASSAGE

depends on stone size, site, shape & associated ureteral oedema.

-Ureteral calculi 4-5mm have 40-50% chance

-Calculi >6mm have <5% but this does not mean that a1cm stone will not pass.

-LU have 50% chance of sp

-MU 25%

-PU 10%

2.MEDICAL EXPULSIVE THERAPY:

1.NSAID: Diclofenac & Indomethacin.
2.PDE-5 Inhibitors like Tadalafil
3.Alphablockers: Tamsulosin
4. Ca channel blockers: Nifedipine.

3.ESWL

4.Endoscopic Stone Removal:

a. Dormia basket
b. Ureteric meatotomy.
C. Ureteroscopy.

5.Open surgery & Laparoscopic (Ureterolithotomy)

BLADDER STONES

Primary= **Develops in sterile urine & often originate in kidney.**

Secondary= **occurs in presence of infection, outflow obstruction, impaired bladder emptying, or F.B(foreign body).**

CLINICAL FEATURES

Men are affected 8 times more frequently than women. A solitary bladder stone is the rule, but there are numerous stones in 25% of Pts. Stone analysis frequently reveals ammonium urate, UA (uric acid), or Ca oxalate.

SYMPTOMS

Frequency, sensation of incomplete emptying, pain(strangury), it occurs at end of micturition and referred to tip of penis in males or labia majora in females, more rarely referred to perineum or suprapubic region.

In children screaming and pulling at penis with hand at end of micturition are indicative. Hematuria, interruption of urinary stream. Infection is a common presenting symptom.

ON EXAMINATION

1. May be normal
2. May be suprapubic tenderness.
3. Vaginal exam.: occasionally large calculus is palpable in female.

TREATMENT OPTIONS FOR BLADDER CALCULI:

1- ESWL

2.Endoscopic vesico - litholapaxy :

By cystoscope with use of various types of lithotripters as mechanical, ultrasonic, electrohydrolic or laser lithotripters.

3. P/C Suprapubic Litholapexy.

4. Open vesicolithotomy .

URETHERAL STONES :

- Small stones near the external meatus can be grasped with a grasper.
- Large and posterior uretheral stones can be pushed to the bladder and removed endoscopicaly.

PREVENTION

In bilateral & recurrent stone formers:

1.S.Ca, PO_4, and PTH
2.S.UA
3.Urinary urate, Ca,& Phosphate in 24 hr collection,& urine should be screened for cystine.

4. Analysis of any stone passed.
5. Dietary advice
6.Drink plenty of fluid.
7.Drug TRT: is largely ineffective except in those who are shown to have idiopathic hypercalciuria: Bendroflumethiazide 5mg.

ΕΥΧΑΡΙΣΤΩ TÄNAN HVALA GRACIAS DZIĘKUJĘ TACK

GRAZIE ありがとう MERCI

THANK YOU

DIAKUIU

PALDIES

ACIU TAK DANKE DANK U WEL ДЗЯКУЮ

СПАСИБО 谢谢 OBRIGADO diolch KIITOS

TESEKKUR EDERIM