

# دکتر محمد هاتف خرمی دانشگاه علوم پزشکی اصفهان تشخیص و درمان سنگهای ادراری



CONGRESS 2021



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# علايم سنگهای ادراری

- ▶ رنال کولیک
- ▶ درد مبهم پهلو
- ▶ هماچوری
- ▶ علايم گوارشی
- ▶ افزایش کراتينين
- ▶ عفونت ادراری

# رنال کولیک

درد ناگهانی ▶

درد کولیکی ▶

انتشار درد ▶

معاینه شکم ▶

تب ▶

# تست اختصاصی برای تشخیص سنگ

CT ▶  
IVP ▶

# درمان رنال کولیک

- ▶ تسکین درد
- ▶ درمان تهوع
- ▶ مایع درمانی
- ▶ اندیکاسیونهای بستری
- ▶ دارو

# سنگ با علایم غیر اختصاصی

سونو ▶

ازمایش ادرار ▶

# مهمترین فاکتور برای تصمیم به درمان

اندازه ▶

محل ▶

جنس ▶

درد ▶

# مهمترین فاکتور

ایجاد انسداد و هیدرونیفروز ▶



درمان

عدم انسداد

انسداد

بیشتر از ۶  
میلیمتر مداخله

کمتر از  
۶ میلیمتر درمان  
انتظاری

مداخله

سنگ کلیه

بزرگتر از  
۲ سانتی متر

کمتر از  
۲ سانتی متر

pcnl

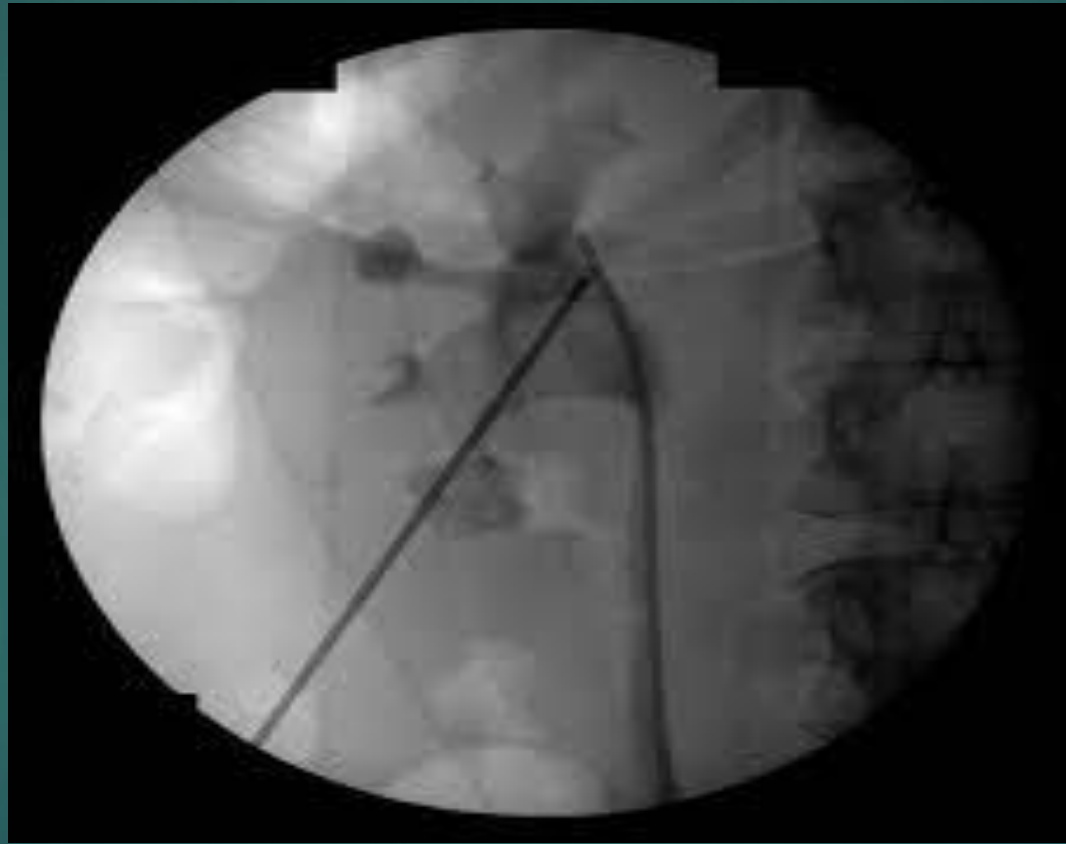
eswl

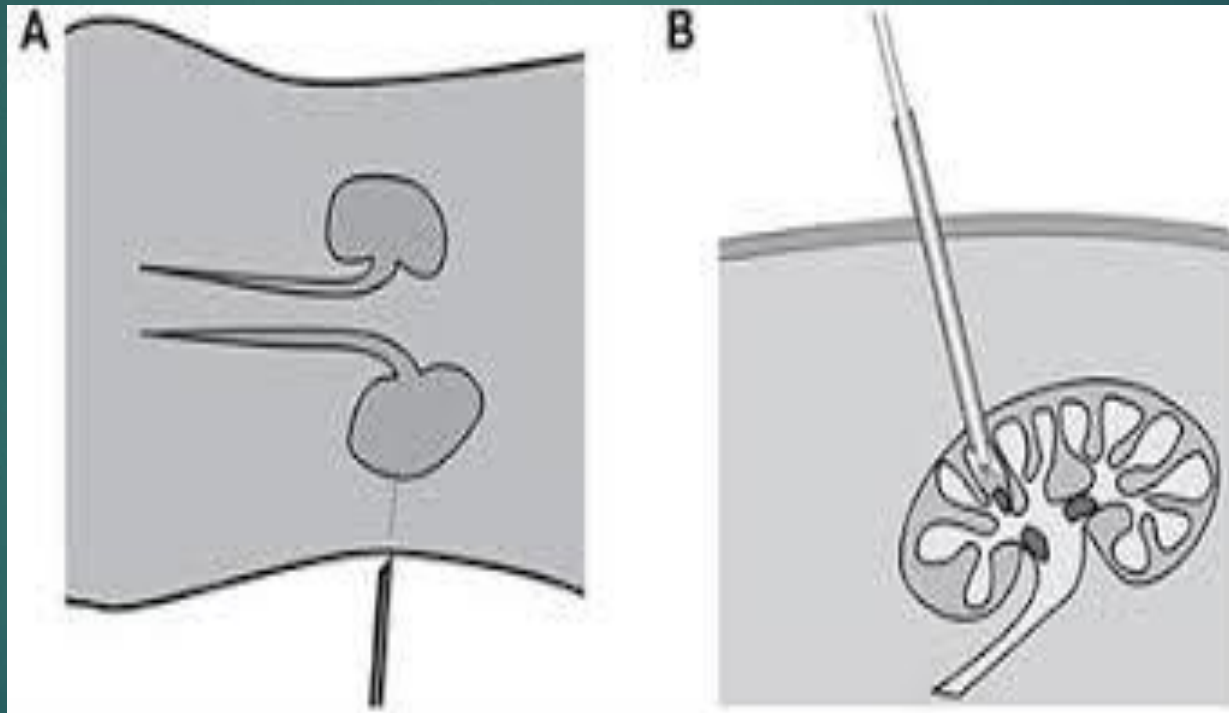
# Prone and prone-flexed positions

- ▶ A padded support is placed under the patient's chest
- ▶ With the OR table flexed 30–40°,
- ▶ the patient's flank is flattened and there is increased area available for puncture
- ▶ decreases obstruction from the buttocks with lower pole access.

- ▶ PCNL is most commonly performed in the prone position
- ▶ with straightforward access to the collecting system

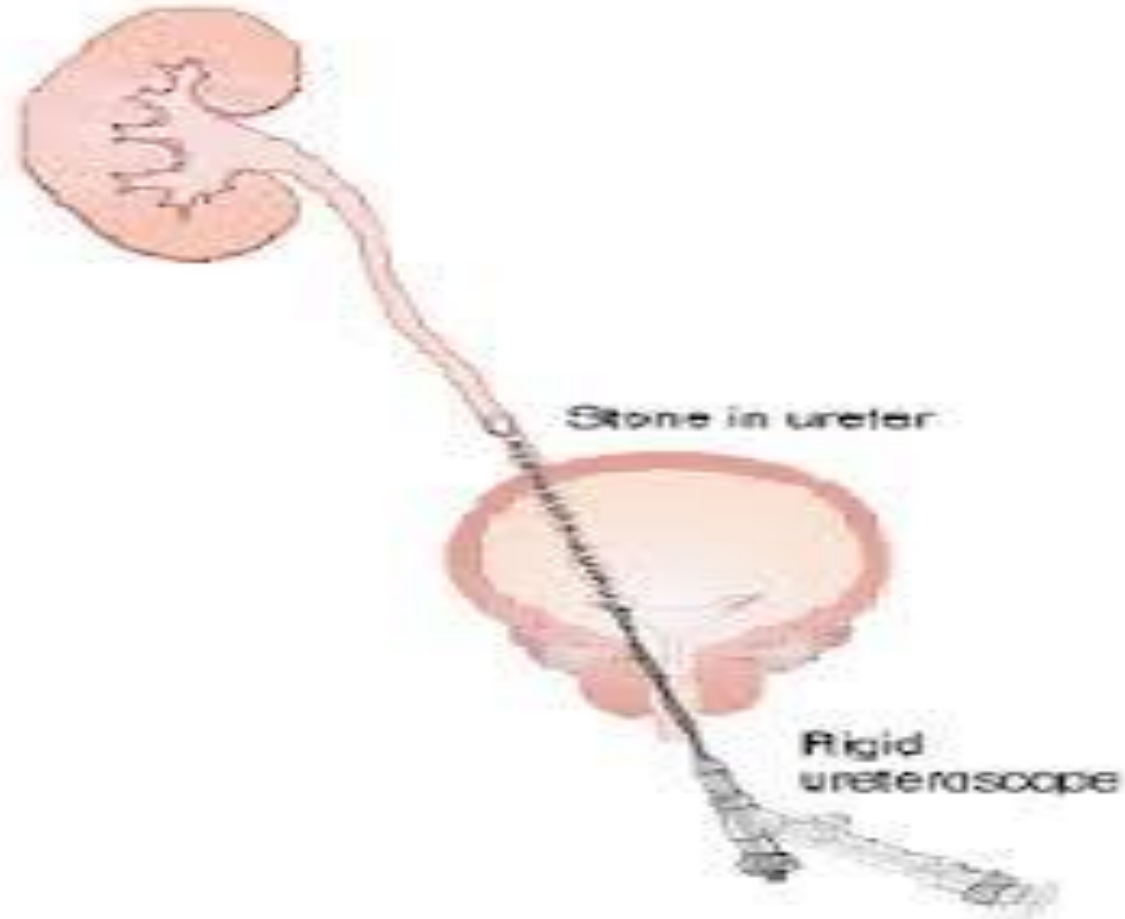






# PCNL







# **Medical Evaluation and Treatment of Nephrolithiasis**



## KEY POINTS: ECONOMICS OF METABOLIC EVALUATION

- Routine performance of a comprehensive metabolic evaluation may not be economically sound if applied to all stone patients.
- Many first-time stone formers may not benefit economically from a metabolic evaluation unless initial screening puts them in a high-risk category.
- Recurrent stone formers are best treated with a metabolic evaluation and directed medical therapy.

# Indication for Extensive Diagnostic Evaluation

- ▶ Recurrent stone formers
- ▶ Strong family history of stones
- ▶ Intestinal disease (particularly chronic diarrhea)
- ▶ Pathologic skeletal fractures
- ▶ Osteoporosis
- ▶ History of urinary tract infection with calculi
- ▶ Personal history of gout
- ▶ Infirm health (unable to tolerate repeat stone episodes)
- ▶ Solitary kidney
- ▶ Anatomic abnormalities
- ▶ Renal insufficiency
- ▶ Stones composed of cystine, uric acid, struvite
- ▶ obese patients with stones, particularly obese women
- ▶ patients with diabetes and stones, particularly those with poorly controlled diabetes
- ▶ children,



## ▶ *Timing of specific metabolic work-up*

- ▶ For the initial specific metabolic work-up, the patient should stay on a self-determined diet under normal daily conditions and should ideally be stone free for at least 20 days

# MEDICAL MANAGEMENT


First step is  
**CONSERVATIVE**  
Treatment

# CONSERVATIVE MEDICAL MANAGEMENT

- **Fluid Recommendations**
  1. *Volume*
  2. *Water Hardness*
  3. *Carbonated Beverages,*
  4. *Citrus Juices*


# CONSERVATIVE MEDICAL MANAGEMENT

- ▶ ***Dietary Recommendations***
- ▶ ***Protein Restriction (.8-1gr/kg)***
- ▶ ***Sodium Restriction (<3-5 gr)***
- ▶ ***Dietary Calcium (1000 -1200mg)***
- ▶ ***Oxalate Avoidance***
- ▶ ***Vegetable and fiber***
- ▶ ***Obesity***
- ▶ ***Physical activity***



It is anticipated that with these conservative measures alone, a significant number of patients may be able to normalize their risk factors for stone formation. Thus only these conservative measures may be necessary to keep their stone disease under control

After 3 to 4 months on conservative management, patients should be re-evaluated

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- ▶ If the patient's metabolic or environmental abnormalities have been corrected, the conservative therapy can be continued and the patient followed every 6 to 12 months with repeat 24-hour urine testing as indicated
  - ▶ If, however, a metabolic defect persists, a more selective medical therapy may be instituted.



