

Topics for the clinical case

V Edition of the Clinical Cases Contest on non-surgical clinical management of Kidney Stones

Below you will find a series of possible topics on which to work on the clinical case to be presented in the V Edition of the Clinical Case Contest related to the non-surgical clinical management of Kidney Stones.

- Characterising the circadian rhythm of urine pH page 2
- Follow-up of the lithiasic patient page 2
- Medical treatment and associated diseases page 3
- Medical treatment and surgery page 3
- Medical treatment and associated anatomical abnormalities page 4
- Medical treatment of special lithiasic patient page 4
- Iatrogenesis page 4

1. Characterising the circadian rhythm of urine pH.

Circadian rhythm monitoring of urinary pH is a novel technique that allows characterisation of this important clinical marker in a multitude of pathologies, including urolithiasis.

- a. Characterising the circadian rhythm of urine pH of uric acid stone patient.
 - Products: **Lit-Control® pH Up**, **Lit-Control® pH Meter**, **myLit-Control® App**
- b. Characterising the circadian rhythm of urine pH of calcium stone patient
 - Products: **Lit-control® pH Balance**, **Lit-Control® pH Meter**, **myLit-Control® App**
- c. Characterising the circadian rhythm of urine pH of struvite or infectious stone patient
 - Products: **Lit-Control® pH Down**, **Lit-Control® pH Meter**, **myLit-Control® App**
- d. Characterising the circadian rhythm of urine pH of cystine stone patient
 - Products: **Lit-Control® pH Meter**, **myLit-Control App**

2. Follow-up of the lithiasic patient

Follow-up of patients with urolithiasis is important to reduce the recurrence of clinical events and their associated costs.

- a. Monitoring of water intake in patients with kidney stones using the mobile device application.
 - Product: **myLit-Control® App**
- b. Monitoring of medical treatment in patients with kidney stone disease using a mobile application
 - Product: **myLit-Control® App**
- c. Preventive medical treatment with inhibitors in patients with asymptomatic lithiasis
 - Products: **Lit-Control® pH Up**, **Lit-Control® pH Balance** o **Lit-Control® pH Down**
- d. Medical expulsion treatment with alpha-blockers and inhibitors
 - Products: **Lit-Control® pH Up**, **Lit-Control® pH Balance** o **Lit-Control® pH Down**
- e. Medical treatment of bladder stones
 - Products: **Lit-Control® pH Up**, **Lit-Control® pH Balance** o **Lit-Control® pH Down**

3. Medical treatment and associated diseases

It is important to perform a metabolic analysis or comprehensive analysis in order to find out the underlying causes, risk factors and associated pathologies.

- Treatment of a lithiasic patient with gout
- Treatment of lithiasic patient with chronic kidney disease
- Treatment of a lithiasic patient with Dent's disease
- Treatment of a lithiasic patient with diabetes
- Treatment of a lithiasic patient with Crohn's disease
- Treatment of a lithiasic patient on gastric bypass
- Treatment of lithiasic patient with inflammatory bowel disease
- Treatment of HIV-positive lithiasic patient
- Treatment of a lithiasic patient with rickets
- Treatment of a lithiasic patient with osteoporosis
- Treatment of a single-phase lithiasic patient
- Treatment of lithiasic patient with urinary tract infection
- Treatment of lithiasis and lupus patients
- Treatment of a lithiasic patient with renal carcinoma
- Treatment of a lithiasic patient with primary hyperparathyroidism
- Treatment of a lithiasic patient with Covid-19
- Treatment of lithiasic patient with vitamin D deficiency
- Treatment of lithiasic patient with cacchi ricci
- Treatment of lithiasic patient with polycystic kidney disease
- Treatment of lithiasic patient with sarcoidosis
- Treatment of lithiasic patient with spinal cord injury
- Treatment of lithiasic patient with neobladder
- Treatment of lithiasic patient with metabolic syndrome (hypercalciuria, hyperoxaluria, hypomagnesaemia, hypocitraturia, cystinuria or xanthinuria).
 - Products: *Lit-Control® pH Up*, *Lit-Control® pH Balance* o *Lit-Control® pH Down*, *Lit-Control® pH Meter* y *myLit-Control® App*

4. Medical treatment and surgery

It is important in all patients who have already undergone renal surgery to ensure the prevention of possible recurrence of renal pathologies in order to improve the patient's quality of life.

- Treatment of lithiasic patient with nephrostomy
- Treatment of post-ESWL lithiasic patient to increase Stone-Free Rate
- Treatment of post-PNL lithiasic patient to increase Stone-Free Rate
- Treatment of post-URS lithiasic patient to increase Stone-Free Rate
 - Products: *Lit-Control® pH Up*, *Lit-Control® pH Balance* o *Lit-Control® pH Down*

5. Medical treatment and associated anatomical abnormalities

It is important to carry out a more exhaustive medical control of all those patients with anatomical abnormalities in whom the predisposition to suffer colic is increased.

- Treatment of a lithiasic patient with a sponge kidney

- Treatment of lithiasic patient with obstruction of the ureteropelvic junction.
- Treatment of lithiasic patient with caliceal diverticulum associated with lithiasis
- Treatment of lithiasic patient with ureteral stricture
- Treatment of lithiasic patient with vesicoureteral reflux
- Treatment of a lithiasic patient with horseshoe kidney
- Treatment of lithiasic patient with ureterocele
 - Products: *Lit-Control® pH Up*, *Lit-Control® pH Balance* o *Lit-Control® pH Down*

6. Medical treatment of special lithiasic patient

It is important to note that there are special populations in which medical treatment can support and help reduce the complications of colic.

- Treatment of paediatric lithiasic patient
- Treatment of pregnant lithiasic patient
- Treatment in transplanted lithiasic patient
 - Products: *Lit-Control® pH Up*, *Lit-Control® pH Balance* o *Lit-Control® pH Down*

7. Iatrogenesis

It is important in all patients who have suffered a traumatic medical event to ensure the prevention of recurrent renal pathologies.

- Iatrogenesis due to alkalinisation without urinary pH control
- Iatrogenic due to citrate use in patient with calcium phosphate calculi.
- Iatrogenic due to citrate use in patient with double J catheter.