V Edition of the Clinical Cases Contest on

non-surgical clinical management of Kidney Stones

Official template

Title: Lit-Control pH Balance in the follow-up of the lithiasis patient.

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1. Abstract

We present the case of a 60-year-old man with a history of 4 ESWL sessions for lithiasis in the left pelvic ureter and left URS (3 ureteral lithiasis) + right RIRS.

After active treatment of the lithiasis and a normal metabolic study, we achieved stabilisation of the residual lithiasis with Lit-Control pH Balance treatment and the residual lithiasis remained stable and did not grow for 3 years.

2. Introduction

The normal functioning of the body's acid-base metabolism is essential for the treatment of kidney stones, preventing their formation and growth. We present the case of a severe lithiasis patient who, thanks to pH control with Lit-Control pH Balance, achieved stabilisation of the residual lithiasis without affecting the urinary pH: Phytate prevents the formation and growth of all calcium kidney stones. Magnesium works in synergy with phytate to inhibit the formation of calcium oxalate stones. Polyphenols help limit oxidative stress, one of the causes of stone formation.

3. Clinical Case description

a. Patient information / Medical records

60 years old
Allergies: NAMC.
Toxic: No alcohol. Non smoker.
Medical conditions: CRU follow-up urology. CVRF: Hypercholesterolaemia. No DM. No hypertension.
Surgery: Tonsillectomy, circumcision..

Personal urological history of hyperuricosuria and hypercalcaemia treated with potassium citrate
Metabolic test on 20 January normal (PTH normal)

b. Diagnostic support studies and results

-4 sessions of ESWL for left pelvic ureteral lithiasis
**Lithiasis drained: Calcium oxalate.
- Lithiasis right pelvis R without obstructive sequelae.

Surgery is performed for lithiasis burden due to failure of ESWL treatment and the patient's clinical condition.

c. Diagnosis

Bilateral ureteral lithiasis

d. Treatment

Surgical treatment of lithiasis by means of left URS and right RIRS is indicated.

e. Evolution and progress

After surgical treatment we achieve stability of residual microlithiasis with Lit-Control pH Balance treatment.

f. Clinical results

After surgery we performed a CT scan with a report of bilateral obstructive microlithiasis, with stabilisation during 3 years of follow-up.

Latest revision: pH 5.5

- Abdominal radiograph: abundant stools in a colicky setting, making visualisation difficult. Microlithiasis in CMD and CMI and two lithiasis in CII.
- Echo in consultation: Kidneys without ectasia with caliceal microlithiasis.

4. Discussion

Renal lithiasis is a very common cause of urinary tract morbidity. Its incidence is increasing, with an estimated lifetime risk of 12% in men and 6% in women. The recurrence rate varies between 30-50% after 5 years, although recent studies suggest a lower rate of 2-5% per year. In western societies, 80% of stones are composed of calcium oxalate and/or calcium phosphate, with the other major types being uric acid, struvite (phosphate-ammonium-magnesium phosphate) and cystine. The medical assessment of a patient with a kidney stone focuses on the dietary and metabolic abnormalities that lead to the formation of stones.

Once these factors have been identified, a specific and effective preventive therapy can be planned. Once the stones have been surgically removed, the use of Lit-Control pH Balance to maintain an adequate acid-base balance in the body is essential in the evaluation of preventive treatment, preventing the formation of calcium crystals in the urinary system and protecting the kidney from oxidative stress by inhibiting crystallisation without affecting the urinary pH.

5. Conclusions and recommendations

We use Lit-Control pH Balance to stabilise residual fragments and prevent the formation of new lithiasis.

6. Bibliographic references

- Rodrigo Orozco B, Carolina Camaggi M. Evaluación metabólica y nutricional en litiasis renal. Rev Médica Clínica Las Condes. 2010;21(4):567–77.

- Arrabal-Martín M, Cano-García MC, Arrabal-Polo MÁ, Domínguez-Amillo A, Canales-Casco N, de la Torre-Trillo J, Cózar-Olmo JM. Factores etiopatogénicos de los diferentes tipos de urolitiasis [Etiopathogenic factors of the different types of urinary litiasis.]. Arch Esp Urol. 2017 Jan;70(1):40-50. Spanish. PMID: 28221141.ç+
- Kanashiro A, Angerri O. Importancia del pH urinario en la urolitiasis [Urinary pH relevance on urolithiasis management.]. Arch Esp Urol. 2021 Jan;74(1):102-111. Spanish. PMID: 33459626.