



The International  
Alliance of Urolithiasis



廣州醫科大學附屬第一醫院  
THE FIRST APPLIED HOSPITAL OF GUANGZHOU MEDICAL UNIVERSITY

# APPROACHING 2.0 CYSTINURIC MANAGEMENT: A MEDICAL DIGITAL SOLUTION TO MONITOR AND CONTROL URINARY pH

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## **INTRODUCTION**

Cystinuria is a congenital disease that causes an excess of cystine excretion in urine.

Urinary alkalinisation is the gold standard treatment for cystinuric patients to increase cystine solubility and make it difficult to crystallize. Therefore the importance of urinary pH control to modulate the alkalinizing treatments and maintain urine pH in alkaline range is key.

Nowadays, urinary pH monitoring takes place with strips, a subjective, non-standardized, semiquantitative colorimetric method that compares the results on a scale. Some limitations in terms of diagnostic accuracy parameters were reported in strips.

## **OBJECTIVE**

The objective of the study is to know the satisfaction of a new pHmeter, that has demonstrated superiority in terms of sensitivity, specificity, positive predictive value, negative predictive value and accuracy against strips as a system to monitor the urinary pH in cystinuric patients.



## METHODS

Randomized, controlled open trial performed at the Puigvert Foundation in 28 cystinuric patients with or without urinary lithiasis at time of inclusion.

Cystinuric patients n =28

pH Meter group  
11 patients  
pH measurement :  
Lit-Control® pH Meter

Strips group  
17 patients  
pH measurement :  
Strips

**Urinary pH measurement:** twice a day (first urine in the morning /last before bedtime)  
**Alkalinizing therapy:** according to routine clinical practice

**Follow up period:** 6 months  
**Visits:** Baseline, 1, 3 and 6 months

	Mean (SD)	Min	Max
Age (years)	51,82 (18,58 )	19	76
BMI	27,22 (5,41)	19,44	45,17

### Gender (%)

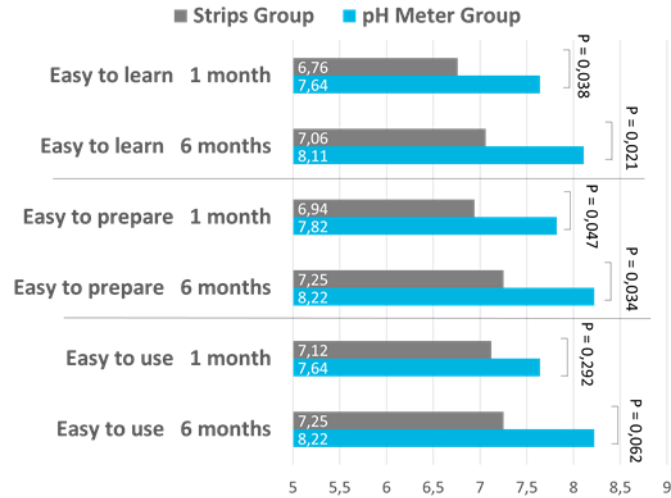
Female (32,1 %)

Male (67,9 %)

Patients descriptive



## RESULTS



Mean score in patients (1 the lowest and 10 the highest)

## CONCLUSION

The Lit-Control® pH Meter has proven to be easier for patients to learn how to use, easier to prepare and with a tendency to be easier to use than strips.

Also, it is a tool with high acceptance by the patients. These facts are very relevant in the sense cystinuria is a chronic disease with urine alkalinisation as the first-line treatment.

Using an easier device to measure urinary pH could help patients stick to urinary pH control and better follow the dietary recommendations and pharmacological treatment.

This digital 2.0 solution offers a new way to work toward empowerment of patients.



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THANK YOU