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Clinical and Therapetical Aspects of Lithiases of the Lower Urinary Appliance: Hospital Al Fousseyni Dao Kayes

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Abstract **Original Research Article**

Introduction: Lithiasis are hard formations that can be formed from certain components of urine and cause pain, signs of urinary tract infections, an obstruction of the flow of urine. They are quite rare in the child but in our cold weather more and more cause consumption of improper water. ***Objective***: To report the clinical and therapeutic aspects of lithiasis of the lower urinary tract at Hospital Fousseyni Daou de Kayes. ***Patients and Methods*:** This was a retrospective study reporting on 16 cases of collapsed lower urinary tract lithiasis from January 2021 to December 2023 conducted in the Pediatric Surgery Service and Fousseyni Daou Hospital of Kayes. ***Results***: During the study period we had encountered 16 cases of lower urinary tract lithiases out of 350 hospitalized patients either 4.57%. The median age was 8 years with extremes of 2 years and 14 years. 15 (93.75%) were of male sex and one was female (6.25%). Cytobacteriological examination was performed in 11 patients or 68.75% and Escherichia coli was isolated from 4 patients or 25% and Proteus was isolated from 6 patients or 37.5%. The biological balance was normal in all patients. Ultrasound allowed visualization of the calculus in all of our patients either 100% of which 2 were localized in the posterior urethra. Cystolithotomy was performed in all patients with 2 after refolding of the calculus in the bladder. The surgical sequelae were simple except for one case of vesico-cutaneous fistula.

Keywords: Lithiasis, Lower Urinary Tract, Pediatric Surgery, Cystolithotomy, Urinary Tract Infection.

INTRODUCTION

Lithiasis of the lower urinary tract occurs in the majority of cases in a context of lower urinary tract obstruction. It remains a relatively frequent pathology in developing countries especially in Africa and Asia. Significant improvement in living standards in developed countries has nearly encouraged its disappearance. The origin of fetal lower urinary tract lithiases resides in urinary tract infections, lower urinary tract malformations and inherited diseases. It can be the source of numerous renal functional disturbances jeopardizing the vital prognosis due to delayed diagnosis. There is no epidemiological study on the calculations of lower urinary appliance in our region. The aim of our study was to analyze the epidemiological, clinical, and therapeutic aspects of lower urinary appliance in our service

PATIENTS AND METHODS

IL presents a retrospective study conducted over a 24-month period from January 2021 to December 2023 at the Pediatric Surgery Service and Surgery of Fousseyni Daou de Kayes Hospital. During the study period we retained 16 cases of lower urinary tract lithiases. The data studied were age sex, background, favouring factors, anatomical location of lithiases, clinical features, treatment and progression.

RESULT

During the study period we hospitalized 350 patients including 16 cases of lower urinary tract lithiases, corresponding to a prevalence of 4.57%. In our series, lithiasis of the lower urinary tract represents 95% of the urinary lithiases recorded during the same period.

The age distribution is described in Table 1. The mean age in our study was 8 years with extremes of 8 years and 14 years. The age tranche of 6 to 10 years was the most represented. During our study period we noticed a net male predominance either 93.75%, 15 boys to one girl. Cytobacteriological staining revealed: 6 cases of proteins, 4 cases of Escherichia coli and 1 case of sterile.

Table 1: Distribution of patients according to age

age	effective	Percent %
0-5	5	31,25
6-10	7	43,7
11-14	4	25
Total	16	100%

The age tranche of 6 to 10 was the most represented

Table 2: Distribution of patients according to different symptomatology

symptoms	number	percentage
dysuria	11	68,75
fever	2	12,5
Mictional Bum	4	25
Macroscopic hematuria	2	12,5
Urinary retention	4	25
Hypogastric pain	6	37,5
Pollachyria	6	37,,5

Dysuria is the most common symptom, bladder globe has been observed in all patients who presented with a globe a urinary retention

Table 3: Distribution of patients according to the germ found at ECBU

Germs Found	Effective	%
Proteus	6	37,5
Escherichia coli	4	25
sterile	1	6,25
Non effect	5	3,12

The Proteus was the most frequently found germ on cytobacteriological examination of urine.

The calculation locations at the lower level of the urinary apparatus are distributed as follows:
Vesical: 14 possibly 87.5%.
Urethral: 2 either 12.5%.

Cystolithotomy was the procedure used to extract the stool in all patients, with refolding of the stool from the urethra to the bladder in 2 cases.

Progression was simple in all our patients except for one case of cutaneous vesical fistula which was observed either in 6.25%.

DISCUSSION

During our study we hospitalized 350 patients including 16 cases of lower urinary tract calculus being 4.57%. This rate may be explained by the fact that the 'urology service undertakes some cases of calculation of the lower urinary appliance. In our series lower urinary tract count represents 95% of urinary tract counts. The seat of the bottom urinary appliance is reported predominantly in developing countries [2], but may be frequent in developed countries [5]. The high frequency of lithiases of the lower urinary tract in our hot region can be explained by the high consumption of milk and dairy products, the low consumption of water.

The incidence of the male sex is clearly higher than that of the female sex this may be explained by the anatomy of the sex in which the urethra is shorter and wider able to easily expel small calculi. In our series ultrasound was the radiological examination used to establish the diagnosis. In the series e Jallouli *et al*., in Tunisia [9], ultrasound was in favor of urinary stones. Several authors agree on the role of urinary tract infections in stool formation by urease germs [15], the Proteus was the most frequently found in our series.

Cystolithotomy was the only technique used in our series, due to the lack of mini invasive means. Our results are consistent with some authors from the sub-region, including Sow in Senegal [11], and Zoung Kany in Cameroon [8].

CONCLUSION

The lithiasis of the lower urinary appliance remains still endemic in our region due to the heat, less water consumption, excessive consumption of milk.

Open-eye surgery remains the most commonly used due to the lack of mini invasive means.

LITHIASIS

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