

Case Report

GIANT BLADDER CALCULUS - A CADAVERIC REPORT

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ABSTRACT

Background: Urolithiasis is the process of formation of stones in the kidney, bladder and urethra is a complex phenomenon yet not clearly understood. It is a condition distributed worldwide and it is dependent on socio-economic conditions that have generated changes in the prevalence, incidence and distribution. We report a giant calculus that we came across during routine dissection of a 60 year old female cadaver in the Department of Anatomy. This cadaveric calculus is reported for the rarity of size of the calculus in modern times, with improved diagnosis and management.

KEY WORDS: UROLITHIASIS; BLADDER CALCULUS.

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INTRODUCTION

Bladder stones are a common feature in domestic animals. Incidences have been reported wherein even tortoises have been found to have calculus. However, in humans Bladder calculi form in varying sizes and numbers and they account for 5% of urinary calculi. They usually occur because of bladder outlet obstruction, neurogenic voiding dysfunction, urinary tract infection or foreign bodies [1,2]. Other contributing factors may include diet, frequency of urination and genetics.

Incidence of bladder calculi may vary in different regions of the world considerably; it is dependent on the geographic area, racial distribution, and socioeconomic status of the community. Changes in socioeconomic conditions over time, and the subsequent changes in dietary habits, have affected not only the incidence but also the site and chemical composition of calculi [3].

CASE REPORT

During routine dissection of a 60 year old female cadaver, a freely mobile mass was noticed inside the urinary bladder. The bladder was dissected, and a giant calculus was found. It weighed 52.13 gms and measured 5.5cms in length, 4.7 cms in breadth and 2.6 cms in thickness (Figure:1). The ureters showed hydronephrosis (Figure: 2). The calculus was a heterogenous mixed type.



Figure 1:Giant Calculus.



Figure2:
Hydronephrosis
ureter.

DISCUSSION

Giant bladder calculi are rare in modern urological practice. It was perhaps surprising that despite sophisticated modern technology, the bladder calculus found in this female cadaver was left unnoticed and untreated. Bladder Calculi results from the precipitation of stone constituents that result due to super saturation in urine.

Reno ureteral calculus composed mainly of calcium oxalate and phosphate is more frequent in economically developed countries, whereas bladder calculi composed of ammonium urate and calcium oxalate is fairly widespread in Asia [4]. So was in our case, the predominant composition of the calculi was calcium oxalate and calcium carbonate. Hypercalciuria, hyperparathyroidism, hypocitruria, or renal tubular acidosis may have led to the calculus formation [5]. South India being a hot place, the climate and diet may also be the cause. As the types of stones formed depend mainly on the composition of urine, which in turn reflects the type of diet consumed in the areas. The stone problem in the tropics was compounded by low urine volumes due to poor fluid intake [6]. On examining the oral cavity of the cadaver we noticed that the women had the habit of chewing beetle leaves, which may have also been a predisposing factor for formation of calculus. As the use of calcium hydroxide in the betel quid is a cause of urinary stones in its users. The chewing of betel quid is a common practice in many countries of the world, particularly in Southeast Asia [7]. In fact the quid consists of a preparation of areca nut, betel leaf and calcium hydroxide "lime" paste ("chuna").

CONCLUSION

Epidemiological studies of urolithiasis, propose a sufficient intake of fluid is one of the most important preventive measures for stone formation and stone recurrence. Stone composition, urinary risk factors and dietary analysis suggest that diet, dehydration and nutritional habits and urinary tract infections are the main causative factors of stone disease [8].

In Asia, it seems that the peak frequency of calcium oxalate stones occurs at an earlier age (30-50 yr) [9]. In countries like ours, people are afraid to go under the knife after being detected with a stone. There are plenty of alternate systems of medicine practiced by quacks. They keep the patients in the dark by claiming to dissolve the stone by medicines. This enhances morbidity. The present case might have been a victim of such a situation. This case is reported to sensitize the medical students about the quackery enhancing misery, to counsel the patients to undergo suitable mode of treatment at the earliest and the possible failure of modern procedures in the event of such a big calculus.

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