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Crystalluria types and incidence in Basra City; southern of Iraq

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Abstract

In Basra City, Southern of Iraq there was increase in the incidence of urinary tracts problems, these problems include frequent urinary tract infection and crystalluria .

The purpose from our study is to find out which predominant types of crystalluria and which gender and age has higher incidence values ; where 328 urine samples for males [n=91] and females [n=237] of different ages where analyzed by general urine examination, and sediment was identified by polarized optic microscope to differentiate types of crystals. The average age of patients, expressed as mean \pm standard deviation, was [38.05 \pm 17.57], and age range extended from \leq 9-80 years and divided into seven age groups from \leq 9 years old to equal to or greater than 60 years old .The data was analysed statistically by using *t* test and chi analysis of frequency at $p < 0.05$. The results showed only two types of crystalluria are found. Which is uric acid that represented 96.03% and Calcium oxalate that represented 3.97 %. There was no cysteine, or struvite crystals. Incidence percentage of uric acid crystals was greater in both genders (95.6% for males and 96.2% for females) as compared with the incidence percentage of calcium oxalate (4.4% for males and 3.8% for females) , and there was no significant difference between males and females in the incidence percentages for each type of crystalluria .

The patients samples were then divided into seven age groups from \leq 9 years old to equal to or greater than 60 years old and there were no significant differences (at $p < 0.05$) among all age groups in the incidence percentage of each type of crystalluria.

Our finding there were only two types of crystalluria are most predominant ; those are uric acid and calcium oxalate and the incidence of uric acid crystalluria was significantly greater than oxalate in both genders and age groups, which may be greatly different from that reported in several studies outside country .

Key-words: Crystalluria , Uric acid crystals , Calcium oxalate crystals