SURGERY SECTION II

ORAL PRESENTATIONS

171. THE IMPORTANCE OF METABOLIC EVALUATION IN PATIENTS WITH NEPHROLITHIASIS

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Introduction: Nephrolithiasis has a significant social and financial burden. However, the impact of this disease can be diminished by the appropriate metabolic evaluation of recurrent stone formers, in order to identify the risk factors for recurrent stone events. The significance of biochemical screening in stone formers has been a debated topic. This study was conducted to investigate the rate of metabolic abnormalities in our recurrent kidney stone formers so that this information would help in assessing the value of biochemical screening in our practice. Purpose: To investigate the frequency of metabolic abnormalities in patients with nephrolithiasis.

Material and methods: Over a fifteen-month period, recurrent kidney stone disease patients had one random blood specimen and one random 24-hour urine collection, analyzed for metabolic abnormalities. Serum was checked for calcium,uric acid, urea, phosphate and creatinine. The urine was measured for volume, pH, urea, creatinine, calcium, magnesium, oxalate, citrate, crystals and urine culture.

Results: Out of a total of 110 patients, 85 (77,27%) had some urinary or blood abnormality. The highest number of abnormalities was in urine. Low volume 37 (43,52%), hypercalciuria34 (40,08%), hyperoxaluria20 (23,52%), hyperuraturia 21 (24,14%) and positive urine culture 18 (21,17%) were the main urinary abnormalities. Elevated serumcreatininein 9 (10,58%) patients was the commonest blood abnormality. Females had significantly higher frequencies of urinary infection (44,68% vs 12,5%, $p<0,001$), low urinary volume (46,81% vs 20,0%, $p<0,01$), hyperoxaluria(36,17% vs 10,0%, $p<0,01$) and hypocitraturia(36,17% vs 0%, $p<0,001$).

Conclusion: A high frequency of urinary metabolic disorders in recurrent nephrolithiasis highlights the significance of metabolic evaluation in this category of patients. Most of the biochemical abnormalities, if treated, can considerably lower the recurrence rate of recurrent stone disease, one thus concludes that for rational, efficient and specific urolithiasis management, biochemical screening and particularly urinary screening should be practiced. Such diagnostic evaluation would help in providing precise treatment and efficient prophylaxis.

Keywords: metabolic evaluation, recurrent nephrolithiasis