โรคนิ่วไตสามารถป้องกันได้หรือไม่

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Renal stone disease : is it possible to control?

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The prevalence of renal stone disease in Thailand varies with the population studied and the methodology used. It was estimated that its prevalence should be 3.5-16.7% population[1-3]. Even these studies were not large population base studies, but it is figured out that renal calculi is a common disease in Thailand especially in the northeastern part.

Since the first national congress on renal stone disease was held in Khon Kaen University in 1985, a number of studies were performed to elucidate the pathophysiology of the disease, unfortunately there have not had clinically application yet.

In the west, hypercalciuria is one of the major biochemical abnormalities detected in the patients, data In Thailand have been shown that the patients almost are hypocitraturic non-hypercalciuria[4] that is included in idiopathic calcium stone group. Causes of difference are still unknown, but genetics and environmental factors may play roles.

In this issue of the Journal, Pinsuwan, Tangjareon, and Thatarporn had studied the incidence of urinary stone disease and stone composition in Kalasin province. The results, that have still confirmed the other studies[1,5-7], showed most cases were male in the fifth decade of age and calcium oxalate stone was the most common type of stone. All patients were received surgical treatment that is indicated burden of the disease. However, because of high recurrence rate and renal stone disease [8-9], by itself and its consequence, can cause renal dysfunction with high morbidity and mortality, the severity of this problem is so high comparable to other diseases. So, renal stone disease should be aggressively treated, and prevention of recurrent stone is the best policy to control the problem.

Some types of renal stone such as uric acid[10] and cystine[11], have specific preventive measures. For these stones, it is possible to prevent a new stone formation.

Unfortunately, for idiopathic calcium stone, no clearly pathogenesis defined, the studies[12] concentrated on inhibitors GLycosaminoglycans, Tamm-Horsfall protein, Nephrocalcin, Uropontin, citrate, magnesium has not given any breakthrough points on prevention. At present only citrate[13-15] and magnesium[16] can be applied to clinical practice. Some studies showed that potassium citrate has its role as a good universal inhibitor, and the more palatable and more pathophysiology potassium magnesium citrate[17] has been currently brought to patients as an inhibitory drug. Anyway, it is too early to say that all of them are a perfect preventive drug because they can only reduce the incidence of recurrent stone, not absolutely prevent.

Up to now only diet modification especially high fluid intake[18-19] is the acceptable preventive measures, that show credits on stone prevention. Anyway, even we have a perfect preventive measure in the future, we still have two obstacles for approaching a good outcome. Firstly, long-term adherence to the treatment is usually a problem especially in Thailand. Most cases that were prescribed preventive measures discontinue therapy in duration less than 1-2 years. Secondly, physicians are often reluctant to treat renal stone disease aggressively influencing by their knowledge, attitudes, and beliefs; adverse effects of the drugs, the costs of long term therapy. So, to control the disease, these behaviors should be meticulously adjusted or corrected.

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