How can a ureteral stone cause pain without hydronephrosis?

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Dear Editor,

We read the article by Song et al. with great interest [1]. This is a valuable study in the literature that evaluates the frequency with which patients with ureteral stones and renal colic demonstrate hydronephrosis for better evaluation these patients. They concluded that nearly 1/10 patients suffering from ureteral colic and a ureteral stone will not have hydronephrosis, and therefore, if one uses US to evaluate these patients, the correct diagnosis may not be reached.

Today, low-dose nonenhanced computed tomography is the standard first-line evaluation method for patients with suspected renal colic at emergency department [2]. The mentioned study proved this fact again. On the other hand considering minimizing the patient's exposure to potentially harmful ionizing radiation is essential. There are two valuable studies in the literature that validates the use of the STONE clinical score to categorize patients as low, moderate, and high risk for ureteral stone [3, 4]. This score was first described by Moore et al. at Yale University School of Medicine [3]. Both of these studies showed that the STONE score reliably predicts the presence of uncomplicated ureteral stone with lower likelihood of acutely important alternative findings. We hope that with the aid of these studies and incorporation in future investigations exposure to

radiation and over-utilization of imaging may decrease. This score may help in performing accurate imaging modalities for diagnosis of ureteral stones also in outpatient patients.

We wonder the answer of the title of the study which asks: "Can ureteral stones cause pain without causing hydronephrosis?" The findings showed that it can be possible, but how? What is the authors' hypothesis about pain related to the ureteral stones without hydronephrosis. Can a ureteral stone itself cause pain, or not? In our daily practice we met patients with ureteral stones frequently, and when hydronephrosis disappears, pain relief improves in them. Can it be resulting from transient hydronephrosis which cannot be detected with imaging modalities?

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Compliance with ethical standards

Conflict of interest None.

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