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LETTER TO THE EDITOR

# Clinical evaluation of ureteral pseudodiverticulosis

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To the Editor,

I read the recent paper on ureteral pseudodiverticulosis (UPD) cases by Morgan et al. [1]. I am interested in the accumulation of UPD cases in their study, as they did not mention the size of pseudodiverticula.

A ureteral diverticulum is a rare entity. In 1947, Culp [2] classified ureteral diverticula into the following two types: congenital (true) and acquired (false). The former is a large, dilated, blind-ended protrusion of the entire wall, and the latter is a large protrusion of the mucous epithelium through the muscular layer. As excretory and retrograde urography became popular, many cases of small, multiple ureteral outpouchings were identified, and this condition might not be unusual, as its incidence was reported to be 11% in a study of 100 postmortem cases [3]. These multiple ureteral outpouchings have been referred to as multiple ureteral diverticula [4], ureteral diverticulosis [5], and UPD [3, 6]. Wasserman et al. [3] performed a detailed clinicopathological study on multiple ureteral outpouchings and called the condition UPD, as it could not be considered in the classification proposed by Culp [2]. The authors noted that multiple ureteral outpouchings of UPD are small, do not involve the entire wall of the ureter, and consist of non-neoplastic hyperplastic urothelium that invaginates into the ureteral lamina propria and does not penetrate the proper muscle [3]. The term UPD may have been exclusively used for such a condition; however, as UPD is a clinicopathological term, attention should be paid to the accumulation of UPD cases, when UPD is considered without histological evaluation. Di Paola et al. [7] reported a case of UPD with the size ranging from 3 to 6 mm on retrograde pyelography; however, the microscopic photograph of one of the outpouchings showed the invaginated epithelium penetrating the muscularis propria, which cannot be referred to as UPD according to the study by Wasserman et al. [3, 6]. As Wasserman et al. reported that outpouchings of UPD were 4 mm or less in diameter, larger ureteral outpouchings may not be considered in UPD. It is preferable for UPD to be defined by small, multiple ureteral outpouchings 4 mm or less in diameter when UPD is clinically evaluated. In addition, as UPD can be detected by multidetector computed tomography [8], it may be useful to confirm that outpouchings do not lead off from the ureteral wall on multidetector computed tomography in order to rule out the possibility of diverticulum as defined by Culp [2].

## Compliance with ethical standards

**Conflict of interest** The author states that there is no conflict of interest or funding source.

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