Massive Enlargement of the Kidney in Glandular Metaplasia of the Renal Pelvis

K.Y.		Lam
C.H.		Choi

Department of Pathology, Queen Mary Hospital, Hong Kong

K.Y. Lam, MD, Department of Pathology, Queen Mary Hospital, Pokfulam (Hong Kong)

Fig. 1. Cut surface of the right kidney showing the staghorn stone and dilated cavities with mucoid content.

Dear Sir,

The occurrence of glandular metaplasia in the renal pelvis in the absence of adenocarcinoma is rare. There are only 14 documented cases in the literature [1-11]. The mean age of all these patients was 47 (range 27-61) years. The male-female ratio was 3:1. Hydronephrosis and pyonephrosis were noted in 86% (n=12) and chronic pyelonephritis in 93% (n=13) of the patients. Stones were present in 12 of the 13 cases (92%) for whom data were available. These features might account for the origin of the diffuse glandular metaplasia. We add our experience by reporting a case with certain atypical features.

A 79-year-old Chinese male presented with a 2-day history of persistent epigastric pain. He developed sudden cardiac arrest and died a few hours after admission. At autopsy, the cause of his death was acute myocardial infarction. In addition, the orifice of the right ureter was obstructed by a bladder stone (1 cm in diameter). Right hydroureter and hydronephrosis were noted, presumably as a result of the obstruction. The right kidney measured 26×13×4 cm and weighed 1,675g. The pelvi-caliceal system was markedly dilated and filled completely by thick mucinous materials, and the epithelium was confirmed by microscopic examination to contain mucin-secreting columnar cells. A large staghorn stone (6×5×5 cm) was present amongst the mucin (fig. 1). Chronic pyelonephritis and nephrosclerosis were also seen in both kidneys. Thus, the present case showed some peculiar characteristics: (1) the kidney was the largest and heaviest one ever reported and contained huge amounts of mucin, and (2) the patient was the oldest one with these features found in the literature.

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