Micropapillary urothelial carcinoma of the ureter

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SUMMARY
Micropapillary urothelial carcinoma (MPUC) is a rare aggressive variant of urothelial carcinoma, associated with advanced tumor stage, high tendency to invade lymphovascular spaces, and metastasize to lymph nodes and other organs. Therefore, it has a poor prognosis. One of the most prominent histological features is the presence of small, round empty spaces surrounding infiltrating tumor nests. If detected, even a small focus of micropapillary pattern may be therapeutically significant; the higher proportion of micropapillary component, the worse the prognosis. Radical nephroureterectomy is the treatment of choice even in the setting of superficially invasive disease. Although, MPUC has been well studied in urinary bladder, only a few cases of MPUC in upper urinary tract have been described. We are describing a case of a 79-year old woman with micropapillary urothelial carcinoma involving ureter and review the literature of this rare entity.

Keywords: transitional cell carcinoma – micropapillary carcinoma – ureter – urinary bladder

Mikropapilární uroteliální karcinom ureteru

SOUHRN
Mikropapilární uroteliální karcinom (MPUC) je vzácná agresivní varianta uroteliálního karcinomu, asociovaná s pokročilým klinickým nádorovým stadiem, s vysokou tendencí k lymfovaskulární invazi a k metastázám do lymfatických uzlin a dalších orgánů. Proto má špatnou prognózu. Jedním z nejvýraznějších histologických znaků je přítomnost malých okrouhlých opticky prázdných prostorů kolem infiltrujících skupin nádorových buněk. Identifikace i malé oblasti mikropapilárního růstu může být terapeuticky významná - čím větší je mikropapilární komponenta, tím horší je prognóza. Radikální nefroureterektomie je léčnou volby dokonce i u povrchově invazivních nádorů. Ačkoli je MPUC dobře známý v močovém měchýři, v horních vývodných močových cestách bylo zaznamenáno jen několik případů. Naše kazuistika přináší popis případu 79-ti leté ženy s MPUC v ureteru s přehledem literatury.

Klíčová slova: uroteliální karcinom – mikropapilární karcinom – uteter – močový měchýř

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Micropapillary urothelial carcinoma (MPUC) is a rare aggressive variant of urothelial carcinoma usually occurring in urinary bladder, while minority of tumors arises from urinary pelvis and ureter. Because of their low incidence, most studies associate MPUC of pelvis and ureter aligning them as micropapillary carcinoma of upper urinary tract. Several studies have confirmed that MPUC is associated with advanced tumor stage at time of diagnosis. It has high tendency to invade lymphovascular spaces, and metastasize to lymph nodes and other organs (1–4). Micropapillary carcinoma is a unique histological variant occurring in several other organs including the breast, lung, salivary gland and colon with high stage at time of diagnosis and poor prognosis compared to conventional carcinomas arising in the same organ (5). Although, MPUC has been well studied in urinary bladder, only few cases of MPUC in upper urinary tract have been described (7–13). We report a case of MPUC of ureter and review the literature.

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CASE REPORT

A 79-year old woman was admitted to our hospital because of left lumbar pain and haematuria. Intravenous urography disclosed small organic filling defect in upper part of left ureter. Diagnostic ureteroscopy with biopsy of small, sessile tumor was performed. Pathohistologic examination on small biopsy showed small clusters and cords of atypical cells displaying hyperchromatic nuclei. Left radical nephroureterectomy was performed one week afterwards.

Grossly, the kidney showed no remarkable changes. Ureteral lumen was obstructed by gray-white, poorly circumscribed tumor spreading to the ureteral wall (Fig. 1).

Microscopically, tumor found in ureter consisted of small nests of tightly cohesive tumor cells displaying hyperchromatic nuclei with scant rim of lightly eosinophilic cytoplasm. The tumor was composed entirely of micropapillary component and showed invasive growth pattern affecting inner part of muscular layer of the ureter (Fig. 2, 3). The tumor nests showed distinctive retraction artifacts from the surrounding stroma. No spread beyond muscularis was observed, mul-