CASE REPORT

UROTHELIAL CARCINOMA CONCOMITANT WITH MALAKOPLAKIA IN NON-FUNCTIONING NEPHROLITHIC KIDNEYS

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УРОТЕЛИАЛЬНАЯ КАРЦИНОМА С СОПУТСТВУЮЩЕЙ МАЛАКОПЛАКИЕЙ ПРИ НЕФУНКЦИОНИРУЮЩИХ ПОЧКАХ С НЕФРОЛИТИАЗОМ

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ABSTRACT

Nephrolithic non-functioning kidney and malakoplakia are major health problems. Kidney function cannot be fulfilled and also this leads to a high risk of development of urothelial neoplasm. We report herein a case of urothelial carcinoma concomitant with malakoplakia in non-functioning nephrolithic kidneys.

Key words: urothelial carcinoma, malakoplakia

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РЕЗЮМЕ

Нефункционирующие почки с нефролитиазом и малакоплакией являются значимыми проблемами здравоохранения. Функция почек нарушается, что повышает риск развития уротелиальной опухоли. В настоящем сообщении представляем случай уротелиальной карциномы с сопутствующей малакоплакией при нефункционирующих почках с нефролитиазом.

Ключевые слова: уротелиальная карцинома, малакоплакия

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INTRODUCTION

Malakoplakia is a chronic granulomatous inflammatory reaction. It is believed to be an impaired response to bacterial infection in which macrophages fail to phagocytose bacteria completely. It involves mostly the urinary and gastrointestinal tracts. Diagnosis is made based on histopathological examination. Nephrolithic non-functioning kidney is also a major health problem. Kidneys in this condition fail to function properly and there is also a high risk of developing urothelial neoplasm.¹⁻³ We report on a case of concurrent urothelial carcinoma and malakoplakia in a non-functioning nephrolithic kidney.

CASE REPORT

A 66-year-old male patient was admitted to our hospital with a two-year history of flank pain. On

physical examination, tenderness was detected in the left lumbar region. X-ray revealed 2-cm stones in the left pelvico-ureteric junction. On ultrasound, grade 1 hydronephrosis and increased vascularity were found. The left kidney was found non-functioning in intravenous pyelogram. Radiologically, no abnormalities were detected in the right kidney and its renal functions were normal. Microscopic hematuria was detected in urine samples. Culture results were negative. Blood biochemical parameters were within normal limits. The patient underwent left nephrectomy, and macroscopically specimen sizes were 25x15x10 cm and its surface was lobular. In the cross section, renal cortex was thin (< 0.1 cm); we found calyces to be severely dilated. The renal pelvis mucosa had irregular appearance in focal areas. In the pelvicalyceal space, a black-brown

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stone was found 2.5 cm in diameter. Microscopic examination of nephrectomy material showed chronic pyelonephritis; additionally, high grade papillary urothelial carcinoma was detected localized in the pelvis but not infiltrating the renal parenchyma. In addition, malakoplakia was found in the mucosa of the pelvis adjacent to the carcinoma (Fig. 1).

In our case, urothelial carcinoma was detected in a non-functioning nephrolithic kidney accompanied by malakoplakia.

CONCLUSION

It is worth keeping in mind that urothelial neo-

Figure 1. (A) High grade papillary urothelial carcinoma in a non-functioning nephrolithic kidney (H&E x 200); (B) Histiocytes with granular acidophilic cytoplasm in a non-functioning nephrolithic kidney with malakoplakia (PAS x 400).

DISCUSSION

Urothelial neoplasms can arise anywhere in the genitourinary tract, but commonly it occurs in the bladder. However, urothelial neoplasms of the renal pelvis are extremely rare conditions. Longstanding kidney stones are known to affect adversely the morphology of the urothelial epithelium. This histopathological change is thought to be due to chronic irritation secondary to recurrent chronic infections depending on stones. Therefore, kidney stones are considered a predisposing factor for the development of carcinomas. In addition, studies in the relevant literature report that malakoplakia, which is a chronic inflammatory disease of unknown etiology, may be accompanied by malignant tumors.¹⁻³

plasms can develop in longstanding non-functioning nephrolithic kidneys and clinical approach should be applied accordingly.

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