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Malakoplakia of the Urinary Tract: A Case Report

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Abstract **Case Report**

Malakoplakia is a rare granulomatous disease that mainly affects the urinary tract but can also affect other organs. This case report describes a patient with chronic urinary symptoms and a diagnosis of malakoplakia confirmed by imaging and histology. We discuss the radiological features, differential diagnosis and treatment.

Keywords: Malakoplakia, Chronic Urinary Infections, Michaelis-Gutmann Body.

INTRODUCTION

Malakoplakia is a rare condition characterised by the accumulation of macrophages with Michaelis-Gutmann bodies. Although its pathogenesis is still uncertain, it is often associated with chronic bacterial infections and immunodeficiency. It mainly affects the urogenital tract, but can also affect other organs such as the lungs, gastrointestinal system and skin. The clinical presentation can vary, making diagnosis difficult without a high level of suspicion.

CASE REPORT

This was a 34-year-old patient with a history of a right foot abscess operated on 10 years previously. Admitted for recurrent bilateral renal colic, associated with an episode of total haematuria evolving for several months, and a swelling of the right IM complicated by ulcerations. Clinical examination revealed swelling of the right leg, with several painful erythematous plaques fistulating to the skin. Blood tests showed hyperleukocytosis with elevated erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP). Ultrasound of the soft tissue was consistent with venitis associated with superficial thrombophlebitis of the great saphenous vein complicated by ulceration. Ultrasound of the urinary system revealed moderate bilateral ureterohydronephrosis with irregular parietal thickening of the bladder, ureteral cavities and calyces. The uroscanner showed moderate bilateral ureterohydronephrosis with no detectable calculi, circumferential and irregular parietal thickening of the bladder and the walls of the ureteral and caliceal cavities in the form of plaques (Figures 1 and 2), enhanced after injection of PDC and multiple retroperitoneal lymph nodes. Cystoscopy with biopsy showed a diverticular bladder with whitish debris, revealing large histiocytes with characteristic eosinophilic cytoplasmic inclusions (Michaelis-Gutmann bodies), confirming the diagnosis of malakoplakia [1]. Urine cultures isolated Escherichia coli, supporting an underlying infectious aetiology [2].

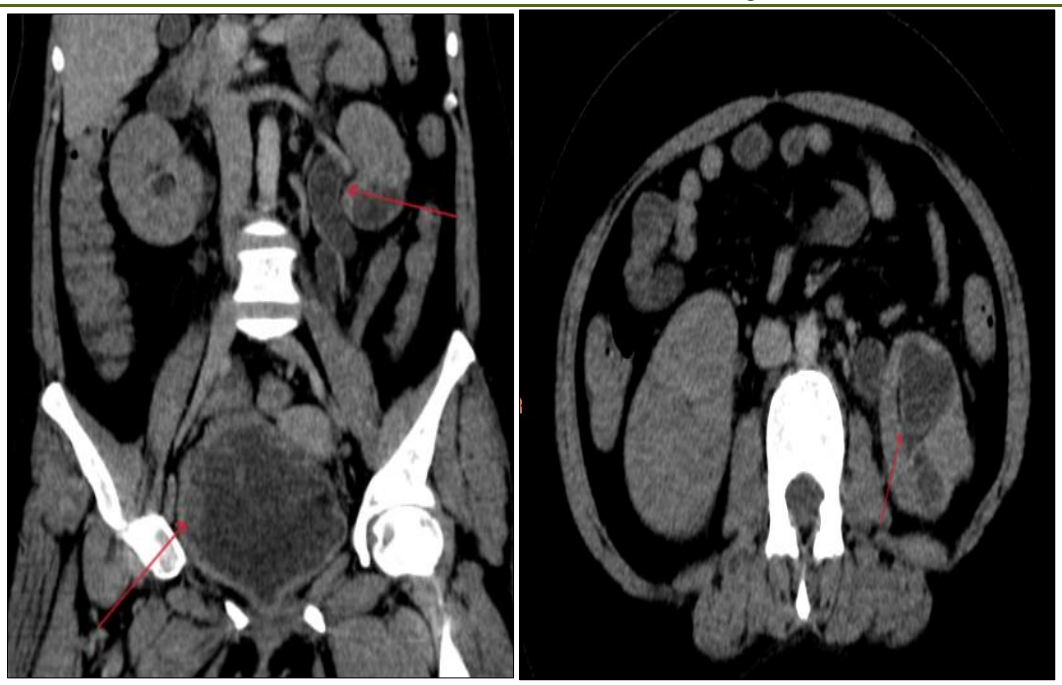

Figure 1 et 2: CT scan (axial and coronal sections) of moderate bilateral ureterohydronephrosis, with circumferential irregular parietal thickening of the bladder and walls of the ureteral and left caliceal cavities.

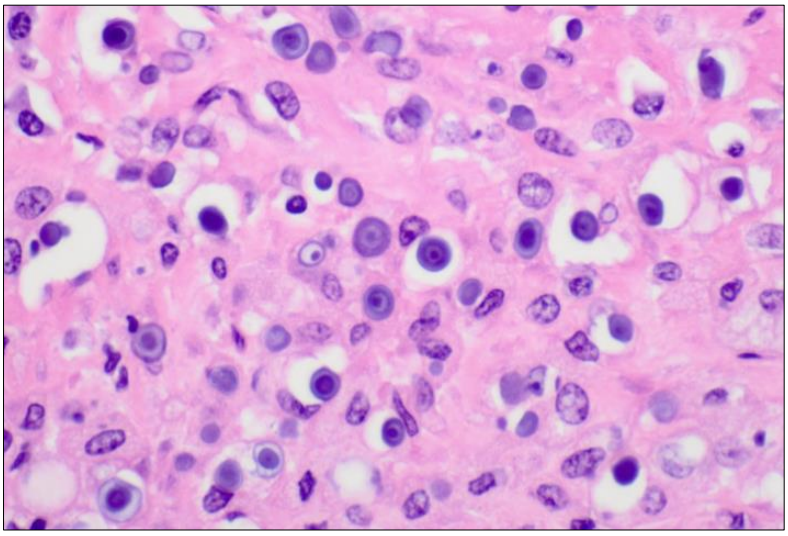

Figure 3: Microscopic appearance, Michaelis - Gutmann body pathognomonic of malakoplakia

DISCUSSION

Malakoplakia is often diagnosed in immunocompromised patients or those with chronic urinary tract infections [3]. The pathogenesis involves a defect in the lysosomal function of macrophages, leading to an accumulation of bacterial degradation products [4]. Michaelis-Gutmann bodies, inclusions of calcium and iron in macrophages, are pathognomonic of the disease [5]. Treatment of malakoplakia is mainly based on eradication of the underlying infection with antibiotics targeting the causative bacteria, often coliforms [6]. In this case, the patient was treated with an antibiotic regimen including ciprofloxacin and trimethoprim-sulfamethoxazole, resulting in progressive resolution of symptoms and reduction of parietal thickening [7].

CONCLUSION

This case highlights the importance of considering malakoplakia in the differential diagnosis of refractory chronic urinary tract infections. Early diagnosis and appropriate treatment are essential to avoid complications.

Conflict of Interest: The authors declare that they have no conflict of interest with this article.

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