

# Acute Obstructive Kidney Failure Revealing Multiple Myeloma with a Bladder Localization: Rare Clinical Case

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## ABSTRACT

We report the case of multiple myeloma with a bladder localization in a 50-year-old man revealed by an acute obstructive renal failure. It is a rare localization with an unusual mode of revelation, with only 15 cases have been reported in the literature.

**Keywords:** Acute obstructive renal failure; Multiple myeloma; Bladder

## INTRODUCTION

Multiple myeloma is a malignant homeopathy, characterized by malignant proliferation of plasma cell which produces a monoclonal immunoglobulin, most often gamma type.

This is a systemic disease which originates and affects the bone marrow and can have an extra medullary development which affects in mainly: the lymphatic tissue, bone, kidney, skin, chest, central nervous system. Bladder localization is rare only 15 cases were available in the literature [1].

## CLINICAL CASE

We report the case of a 50-year-old patient, with no personal or family medical history, who consulted for bilateral low back pain with vomiting without any notion of hematuria or bone pain or other signs.

The general examination found a patient with good physical condition, a minimal discoloration of the conjunctiva, Urine test strip: no hematuria with 1+ of proteinuria.

The physical examination revealed bilateral lumbar region fullness atbimanual exam, a prostate exam was normal.

Ultrasound supplemented by abdominal-pelvic CT showed a bilateral hydronephrosis, with right lateral masse of the bladder associated with circumferential thickening (Figure 1); the kidneys have normal size with good differentiation.

A biological assessment showed a kidney failure at 97mg/l of creatinine, anemia at 8.8g/dl of hemoglobin, k+: 4.8 mmol/l, serum calcium is normal at 98g/l, serum total protein and human serum albumin were normal, white blood cells and platelets count were normal, A urinalysis tests result without hematuria or urinary tract infection.

The patient benefited urgently from a urinary derivation by bilateral nephrostomies giving a normalization of the kidney function at 8mg/l of plasma creatinine after 3 days of this derivation. Cystoscopy revealed a buttoned mass on the trigon area with an extension to right lateral wall (Figure 2).

The histopathological examination (Figure 3) of this mass showed

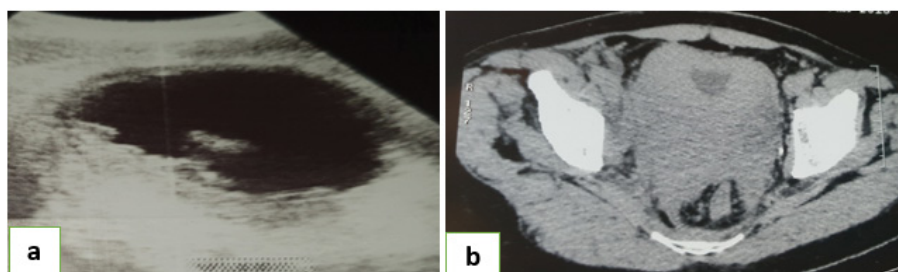


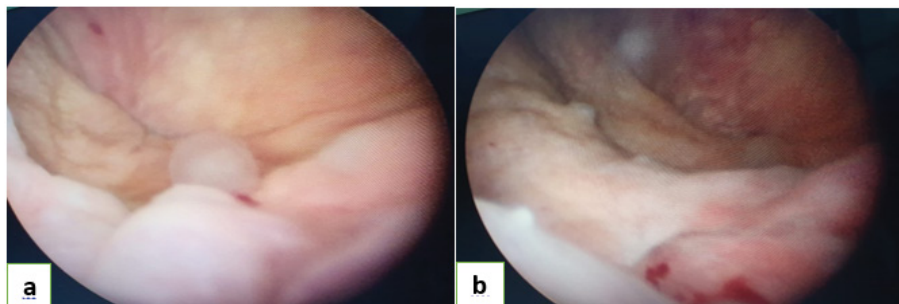
Figure 1: (a) Image of ultra Sound, (b) Abdominal scan: a bladder mass with thickening.

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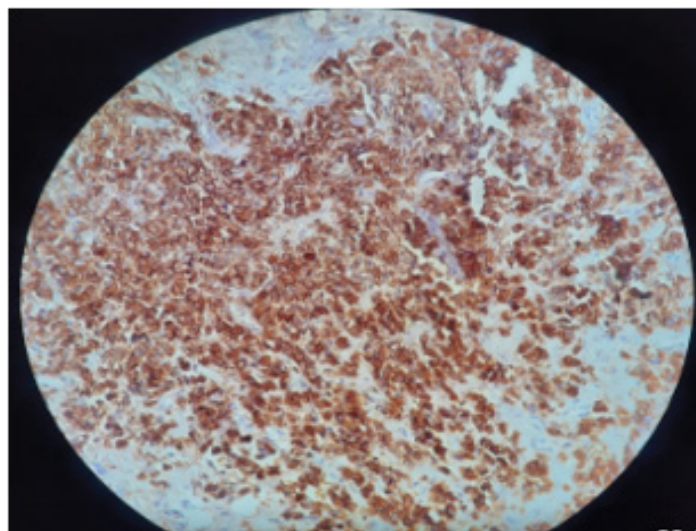
Received: December 04, 2020; Accepted: December 15, 2020; Published: December 22, 2020

Citation: Alami OE, Ghannam Y, Rkik M, Dakir M, Adil D, Aboutaieb R(2020) Acute Obstructive Kidney Failure Revealing Multiple Myeloma with a Bladder Localization: Rare Clinical Case. Med Surg Urol. 9:6.

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**Figure 2:** (a) Cystoscopy: buttoned solid mass in the trigon area, (b) Right lateral wall.



**Figure 3:** Immunohistochemistry: CD138 positive x400.

an infiltration of the sub epithelial connective tissue (lamina propria) by plasma cells, with a diffuse expression of CD138 and light chains kappa by these cells, the other markers are negative: CKAE1/AE3, p63, lambda chains.

The biological exam was completed by a bone marrow biopsy which showed the presence of 59% of dystrophic plasma cells, serum protein electrophoresis showed a total of proteins at 97g/l with a monoclonal gamma peak at 44g/l, immunoelectrophoresis of serum proteins in favor of high level of IgG monoclonal with Kappa light chains, the search for serum proteins in the urine (Bence jones proteins) is negative with a total of the urine proteins is positive at 1.89g/24h.

The Radiographs revealed typical lytic lesions in skull and in third and fourth thoracic vertebrae.

Following these results, the diagnosis of multiple myeloma (and according to the CRAB criteria) with an extra-medullary plasma cell location at the bladder was retained and for which the patient was taken care of in the hematology department 20 August of Casablanca, where a treatment was started with Dexamethasone, chemotherapy, with radiotherapy sessions centered on the pelvis, but the evolution was marked by the death of the patient because a septic shock at the starting point was a pneumonia, after 4 days of his second cycle of chemotherapy.

## DISCUSSION

Multiple myeloma is a malignant plasma cell proliferation, which is defined by the presence of many criteria such as bone lesions, anemia, kidney failure and elevated calcium (CRAB criteria), and which generally confines itself in the marrow bone and in the bone [2].

The extra medullary extension of multiple Myeloma can affect any organ, the mechanism of this dissemination especially to the soft tissue is still poorly understood, some theories have been described in literature reviews such as: the decrease expression of adhesion molecules which will facilitate the adhesion to endothelium, or the decrease in expression of membrane proteins, or the increase in angiogenesis [2-4]. This extension can be direct by a disruption of the cortical bones of myeloma lesions or by hematogenous metastatic spread which affect mainly: lymphatic tissue, skin, kidney, lung and liver. The bladder localization of myeloma is rare; only 15 cases have been reported in the literature[2-4].

In our case we describe not just a rare localization of multiple myeloma but also an unusual mode of revelation, which is an acute obstructive kidney failure upstream of a bladder process, and whose an endoscopic resection allowed us to reveal the diagnosis of asymptomatic multiple myeloma with a rare extension at the bladder without urinary signs, which was treated by an association of a resection, chemotherapy and radiotherapy centered on the pelvis, this protocol of treatment is still a debate between the different authors for the appropriate choice of the effective combination to treat this rare localization [1,5].

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