

Primary osteosarcoma of the urinary bladder

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KEY WORDS

urinary bladder ▶ extraskelletal osteosarcoma
▶ tumour of urinary bladder ▶ sarcoma of urinary bladder

ABSTRACT

Extraskelletal localized osteosarcoma is very rare. Individual reports have shown the possibility of the presence of this type of malignant neoplasm in the soft tissues of limbs and also in internal organs. We present the case of a 77 year-old man with symptomatic haematuria. During cystoscopic biopsy a sample was taken from the tumor on the side wall of the urinary bladder. Histopathological diagnosis confirmed this urinary bladder neoplasm to be an osteosarcoma. The primary character of this tumour was confirmed by exclusion, in radiological examination, of other focuses of the neoplasm, and also invasion from the direction of the pelvis.

INTRODUCTION

The presence of a malignant tumor of bone tissue, osteosarcoma, in soft tissues of limbs and in the internal organs of human is extremely rare. In literature reports exceptional rarity of this extraskelletal localization of sarcoma is always underlined.

Occurrence of osteosarcoma in the muscles of upper and lower limbs is commonly observed. In individual reports extraskelletal location of osteosarcoma in the internal organs has been noted. Tumor has been present in the alimentary tract, including: liver, gall bladder and colon, as well as in the small intestine mesentery and retroperitoneal space.

This type of sarcoma can also be sometimes present in area of the thorax: lungs, pleura and diaphragm. Single reports describe a possibility of localization of this type of neoplasm in the urinary organs.

CASE REPORT

A 77 year old man suffered from the tumour of urinary bladder from December 2007. Haematuria was the first symptom of disease. Transurethral resection of the urinary bladder tumor was performed in district hospital in January 2008 and according to operating urologist, this surgical treatment was radical.

The histological examination showed transitional cell carcinoma of the urinary bladder, in stage T1 and G2 degree of malignancy.

The patient was directed to the consulting urologist in the Warmia and Mazury Oncological Center in Olsztyn for follow up.

During preliminary investigation, in May 2008, the computer tomography of abdominal cavity and pelvis was accomplished. This examination showed a solid tumor located beside and infiltrating the side wall of the

urinary bladder, extending into the lumen as an oval mass with diameter 54 x 52 mm. The invasion of distal part of the right ureter caused his extension and similarly caused hydronephrosis on the right side. Neoplastic invasion of the fat tissue adjacent to the wall of urinary bladder was also described.

Other pathological focuses in the remaining internal organs and in the bones during this examination were not confirmed. Clinically this tumor was qualified as T3b stage.

Samples from the urinary bladder tumor were taken again by transurethral resection and in the histopathological examinations (using additional immunohistochemical staining) diagnosis of a stromal neoplasm – the osteosarcoma of the urinary bladder was established, with degree of malignancy – 30 divisional figures in 10 fields of sight.

At the same time previous histopathological slides from January 2008 were verified by additional immunohistochemical staining and first diagnosis was changed into the sarcoma of urinary bladder.

Due to poor general condition of the patient (WHO 2) and circulation insufficiency (NYHA III) he was excluded from operative treatment – radical cystectomy and he was qualified for treatment with palliative radiotherapy.

DISCUSSION

In the casuistic reports the possibility of development of primary osteosarcoma in the urinary bladder was confirmed. Exceptional rarity of such localization of the neoplastic tumor was reported, so far in the literature only up to 30 cases have been described [1, 2, 3].

Analysis of clinical data in very large groups of patients with sarcoma of the soft tissues of limbs over period of many years confirms rarity of such cases and also gives information concerning the natural course of disease. The majority of sarcoma cases are observed in the age from fifth to seventh decade of life, with prevalence of men to women.

The sarcoma of the soft tissues of limbs is connected with high risk of local recurrence and distant metastases to the internal organs, especially to the lungs, during the first 3 years after primary treatment. 5-years overall time survival is from 37% to 66% in total number of patients, but the complete remission of this disease has also been described. In the extraskelletal localisation of osteosarcoma, methods applied in the treatment of skeletal osteosarcoma, such as surgical resection of neoplastic tumor and chemotherapy are recommended [4, 5, 6, 7].

The natural course of sarcoma located in the internal organs is differently described. Presence of primary osteosarcoma in the urinary bladder is connected with very poor prognosis and almost always short – up to 6 months survival. This is due to high degree of histological malignancy of sarcoma, and with the hidden course of disease (usually in the moment of diagnosis it is tumour of large size and with deep local tissues invasion), also is connected with existence of metastases to different internal organs [8, 9, 10].



Fig. 1. CT scan of pelvis shows solid tumour, significantly involved into the lumen of the urinary bladder. Tumour infiltrates the adjacent tissue.

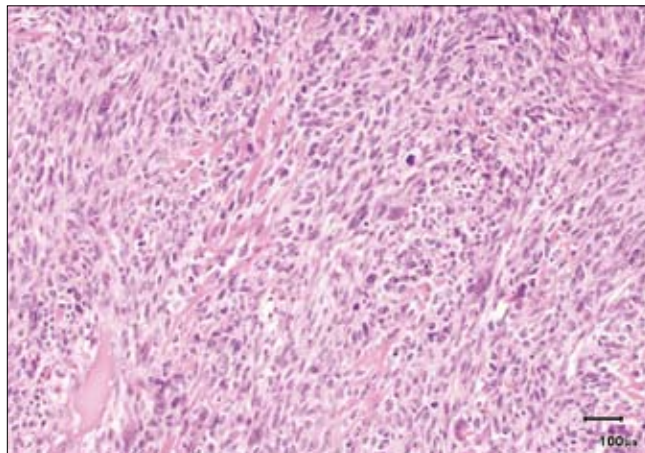


Fig. 2. Specimen from tumour of urinary bladder. Closely packed spindle cells with osteoid deposits are visible. Hematoxyline-eozyne staining. Bar = 100 µm.

Because of a very small number of cases of primary osteosarcoma located in the internal organs, there is no single recommended treatment: it depends on individual clinical situation.

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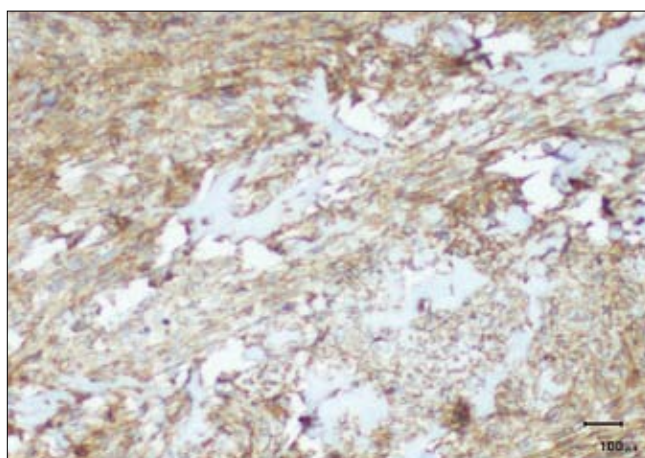


Fig. 3. Sarcoma cells with abundant of osteoid. Immunohistochemical labeling for CD 99. Bar = 100 µm.

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