รายงานผู้ป่วย

Urothelial Carcinoma with Plasmacytoid Feature : A Case Report

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Abstract **Urothelial Carcinoma with Plasmacytoid Features :A Case Peport.**
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Urothelial carcinoma with plasmacytoid features is extremely rare in the routine practice. Only 7 previous cases have been described in the literatures and recent World Health Organization (WHO) classification. Most of which were associated with poor prognostic outcomes.

In this report, we present a case of urothelial carcinoma with plasmacytoid features diagnosed in a 72-year-old Thai male with histological and immunohistological findings together with the literature reviews.

Keywords : **urothelial carcinoma, urinary bladder, plasmacytoid**

Case report

A 72-year-old Thai male, with history of leprosy and hypertension, was admitted at Prapokklao hospital, Jantaburee province, Thailand, with a complaint of painless gross hematuria for two months. Anemia with anemic cardiac murmurs and lower motor neuron-type right facial palsy were noted in the initial physical examination. Excretory urography was performed showing an irregular-contour bladder with a 2.5x4.0 cm filling defect area. Further workup with cystoscopy revealed a papillary tumor, located in the posterior wall and the neck of bladder. With clinical diagnosis of urinary bladder carcinoma, total cystectomy was performed.

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Macroscopic examination of the submitted specimen demonstrated a previously opened urinary bladder, 8.5x6.5x4.5 cm in size. On opening, the bladder wall showed a gray-brown mass with irregular surface, 2.5x2.5x2.0 cm in size, located in the postero-inferior aspect of the bladder wall with extension to the ureteric orifice, as shown in Figure 1.

Figure 1 The gross specimen demonstrates a gray-brown mass with irregular surface, 2.5x2.5x2.0 cm in size, located in the postero-inferior aspect of the bladder wall.

The histopathologic examination showed a highly invasive tumor with extensive areas of necrosis. Foci of urothelial carcinoma in situ were seen at the surface urothelium. The dyscohesive, neoplastic cells had eccentrically-located hyperchromatic nuclei and abundant cytoplasm. Mitotic figures were frequently seen. Focal areas of typical high-grade urothelial carcinoma were also present. Extensive invasion of the muscular layer was observed. Immunohistochemical study ,using the labeled streptavidin-biotin method with monoclonal antibodies (Dako), demonstrated positive immunoreactivity for AE1/AE3, cytokeratin (CK)7, and CK20. Vimentin, Leucocyte common antigen (LCA), CD38, and CD138 were all negative.(Figure 2) The case was diagnosed as invasive urothelial carcinoma with plasmacytoid feature.

After the operation, 3 courses of Cisplatin-Methotrexate-Vinblastine (CMV) regimen

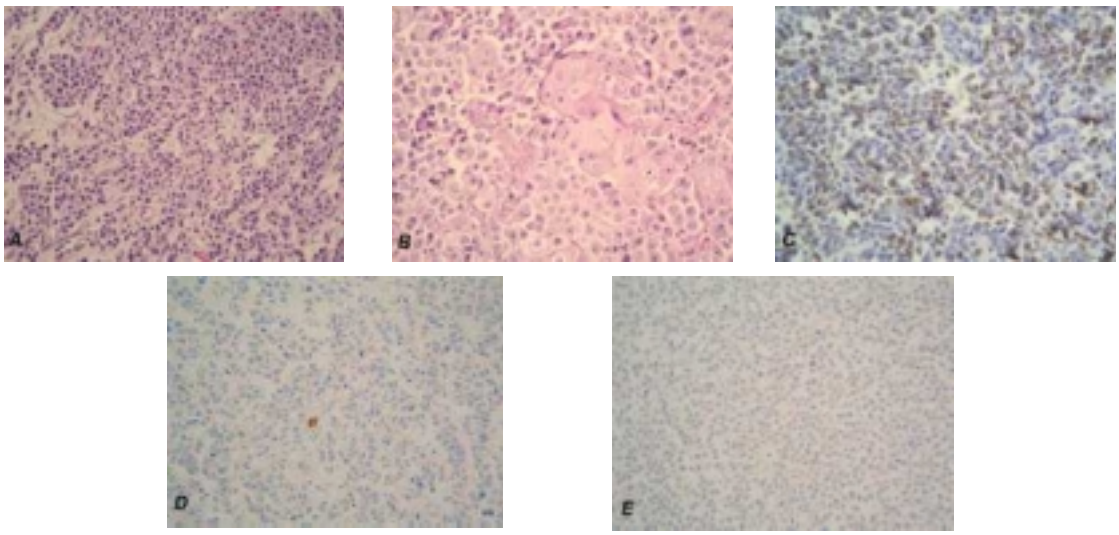

Figure 2 Urothelial carcinoma with plasmacytoid feature. The dyscohesive, neoplastic cells with eccentrically-located hyperchromatic nuclei and abundant cytoplasm are shown (A). Typical high-grade urothelial carcinoma are presented (B). Tumor cells show positive immunoreactivity for AE1/AE3 (C). They are negative with leukocyte common antigen (D) and CD 138 (E).

chemotherapy were administered. Up to now, the patient has survived for 5 months after the established diagnosis.

Discussion

The urothelial carcinoma with plasmacytoid morphology is an extremely rare neoplasm with only seven previous cases described in the literatures.[1-8] It is well recognized in a recent WHO classification of urinary bladder tumors.[9] The current edition of AFIP atlas of tumor pathology, series 4, Tumors of the kidney, bladder and related urinary structures, has mentioned this tumor in the category of rare neoplasm, and called "Plasmacytoid/ Lymphomatoid carcinoma".[10]

The first reported case of urothelial carcinoma with plasmacytoid feature was a 63-year-old man presented with multiple lytic bony metastases of the ribs and skull. With the clinical presentation and aspiration biopsy result as presence of plasmacytoid neoplastic cells resembling the plasma cells seen in myeloma, multiple myeloma was initially diagnosed. Later, the cystoscopy, to investigate the cause of hematuria, demonstrated a bladder tumor with the same cytomorphology. Further investigations on the bladder biopsy specimen clearly confirmed the epithelial nature of the neoplasm, so it was found to be an invasive urothelial carcinoma with plasmacytoid feature.[1] Other cases have later been described.[2-8] All the tumors are poorly-differentiated and usually have a coexisting typical high-grade urothelial carcinoma or sarcomatoid carcinoma in histomorphology.[11] The distinctive microscopic feature of these neoplastic cells is a round, eccentrically-placed nuclei with prominent eosinophilic cytoplasm, similar to plasma cells. The nuclei are small, round and hyperchromatic with inconspicuous nucleoli. They are usually arranged as dyscohesive cells within a loose or myxoid stroma. Recently, one case of plasmacytoid urothelial carcinoma of renal pelvis has been presented in one literature.[12]

For immunohistochemistry, all described tumors have positive immunoreactivity for epithelial markers, such as high-molecular-weight and low-molecular-weight cytokeratins, epithelial membrane antigen.[1-8] One case is positive for syndecan-1(CD138).[6] Our reported tumor also shows positive immunoreactivity for epithelial marker. Leukocyte common antigen and plasma cell markers are negative.

Differential diagnoses of urothelial carcinoma with plasmacytoid morphology are lymphoma,plasma cell neoplasm and melanoma. Bladder involvement has been documented in 10 to 15 percent of lymphomas and leukemias but primary lymphoid neoplasm arising in the urinary bladder are rare.[10] Grossly, urinary bladder lymphomas usually present as discrete tumors rather than diffuse infiltrates. Plasmacytomas arising in the urinary bladder are also very rare and all information is derived from case reports. Immunohistochemical study may be a diagnostic tool for distinguishing the urothelial carcinoma with plasmacytoid morphology from lymphoma and plasma cell neoplasm. Unlike plasma cell neoplasms or lymphomas, the malignant cells of urothelial carcinoma with plasmacytoid morphology can not be demonstrated gamma globulins or light chains and markers of leukocytes or plasma cell, such as CD45, CD20, CD38 and CD138. The differential diagnosis from melanoma can also

be made by immunohistochemistry.

In summary, we present a case of urothelial carcinoma with plasmacytoid feature, arising in a 72-year-old Thai male patient. Unlike the other urothelial carcinoma of urinary bladder, the histomorphology of this tumor is similar to plasma cell neoplasm or lymphoma. Because this is rare entity and this feature is found to be associated with a worse prognosis, the attention to proper samplings as well as the use of immunohistochemical study will be of important for the correct diagnosis. The pathogenesis, natural history, behavior and possible treatment modalities still require further investigations.

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