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EXTRAMEDULLARY PLASMACYTOMA OF THE BLADDER: CASE REPORT AND REVIEW OF THE LITERATURE

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ABSTRACT

Primary plasmacytoma of the bladder is extremely rare, with only 10 cases reported in the literature. We report on a patient who was treated unsuccessfully with radiation and subsequently underwent anterior exenteration with ileo-conduit construction.

KEY WORDS: plasmacytoma, multiple myeloma, drug therapy, radiotherapy, cystectomy

Extramedullary plasmacytoma is a tumor arising from monoclonal neoplastic transformation of plasma cells with resultant proliferation of plasma cells from a single clone. In contrast to multiple myeloma, which originates from and affects the bone marrow, extramedullary plasmacytoma mainly affects soft tissue. Primary extramedullary plasmacytoma more frequently affects the head and neck areas but any extraosseous organ may be involved. The urinary tract is not uncommonly affected by multiple myeloma but it is rarely the site of primary extramedullary plasmacytoma. We found only 10 cases of primary bladder plasmactyoma in the literature.[1-10]

CASE REPORT

A 74-year-old woman presented on May 12, 1988 with irritative voiding symptoms several months in duration. She had a history of hypertension but no prior urological disease. Family history was unremarkable. Physical examination revealed a moderate sized cystocele with prolapse of the urethral mucosa. Bimanual examination demonstrated a palpable mass in the bladder. Laboratory values included a hematocrit of 42, hemoglobin 13.3 with normal indexes, white blood count 10,400, segmented neutrophils 49%, lymphocytes 48%, monocytes 2%, basophils 1%, blood urea nitrogen 14, serum creatinine 1.0 and urine pH 1.008.

Ultrasound of the bladder showed multiple septated cystic and solid masses. Computerized tomography revealed a large right bladder mass radiographically inseparable from the uterus and anterior rectal wall. The patient underwent cystoscopy and a lobulated knobby solid mass was visualized on the right lateral wall extending to the dome. Biopsy demonstrated plasmacytic infiltration consistent with plasmacytoma. Serum electrophoresis showed biclonal gammopathy with a predominant monoclonal IgG and a secondary clone producing IgA. Urine electrophoresis was more consistent with a pure IgG secreting tumor. Bone marrow biopsy revealed no evidence of neoplasia. Radiographs of the skull and the remainder of the plain films failed to demonstrate evidence of myeloma.

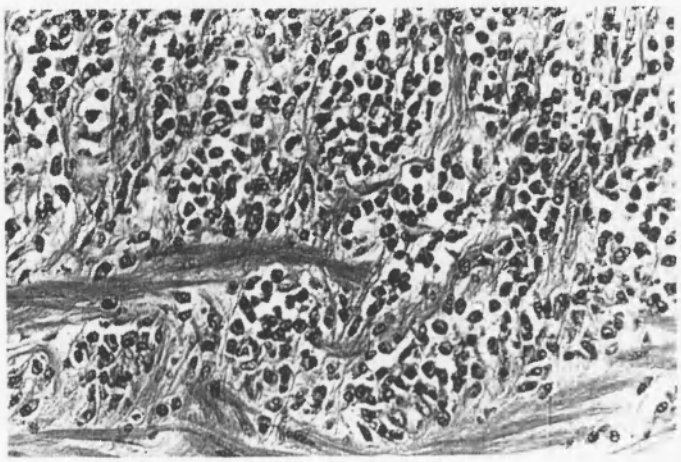
Radiotherapy was initiated in May 1988. The patient received 5,000 cGy., with mild diarrhea as the only complication. Eight weeks after completion of radiation therapy a large mass was still palpable. Repeat bone marrow biopsy was negative. Immunoelectrophoresis showed continued presence of IgG κ with IgA λ biclonal proteins in the serum, and IgG κ with IgA protein minus light chain component in the urine.

Due to the demonstration of relative radioresistance by this tumor, the patient underwent anterior pelvic exenteration in October 1988. Convalescence was uneventful. Postoperative electrophoresis revealed normal levels of IgG in the serum and urine. However, there continued to be a slight elevation in the IgA fraction, which was believed to be an acute phase reactant pattern and not related to the resection of the extramedullary plasmacytoma.

The gross pathological specimen consisted of bladder, cervix, uterus, fallopian tubes and ovaries. The bladder mucosa demonstrated numerous nodular areas, ranging from single lesions of 1 cm. to coalescent areas up to 10 cm. A 0.8 cm. ulcerated area was noted near the right side of the trigone. Cut surfaces revealed white tissue extending through most of the wall thickness but not affecting the serosa. Light microscopic examination displayed extensive denudation of the urothelium. The lamina propria showed marked infiltration by plasma cells. Nuclear hyperchromatism, mild nuclear pleomorphism and occasional mitoses were present. The muscle was deeply infiltrated by plasma cells (see figure). The serosa and surgical margins were free of tumor. Immunoperoxidase studies of the initial biopsy tissue revealed positive cytoplasmic staining for κ chain and IgG. Negative reaction was obtained for IgA, IgM and λ chain. The patient was free of disease in June 1992.

DISCUSSION

A review of previously published cases revealed that extramedullary plasmacytoma of the bladder carries a surprisingly favorable prognosis (see table). The first case of extramedullary plasmacytoma was reported by Marion and Lereux in 1924.[1] Gorfain described the first case of extramedullary plasmacytoma treated by surgical resection in 1949.[2] In 1982 Yang et al reported a case of extramedullary plasmacytoma of the bladder with pelvic and para-aortic nodal metastasis.[6] The patient survived for 12 years after treatment with radiotherapy and chemotherapy. In 1984 Chaitin et al described 6 hematological neoplasms involving the lower urinary tract, of which 1 case was extramedullary plasmacytoma of the bladder treated by



Bladder wall shows dense plasma cell infiltrate. H & E, reduced from ×200.

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