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Extramedullary Plasmacytoma of the Larynx. Analysis of 5 Cases

J. Nowak-Sadzikowska and M. Weiss

Centre of Oncology, Maria Skłodowska-Curie Memorial Institute, ul. Garncarska 11, 31-115 Craków, Poland

EXTRAMEDULLARY PLASMACYTOMA is an uncommon tumour, comprising 4% of all plasma cell neoplasms [1, 2]. Approximately 80–90% of extramedullary plasmacytoma arise in the upper aerodigestive tract [2–6]. Solitary extramedullary plasmacytoma of the larynx is very rare [7–9]. Plasmacytoma of the larynx occurs in men approximately three times more often than in women, and is generally seen at the age of 40–70 years. The most commonly involved site is the supraglottis, followed by the vocal cords, false cords and ventricles [2, 4, 7–9].

We report a total of 5 cases of solitary extramedullary plasmacytoma of the larynx which were seen at the Centre of Oncology in Craków between 1968 and 1986. The patients' characteristics and management are shown in Table 1. The first and only symptom in 4 patients was hoarseness with duration of 3–6 months. In 1 patient the tumour was found incidentally during examination following a head injury. Diagnosis was established by biopsy and histological examination. There were no clinical lymph nodes involved. Bone surveys, chest X-rays, peripheral blood tests and bone marrow biopsies, showed no systemic evidence of plasma myeloma. Urine specimens were negative for Bence-Jones protein.

Each patient was treated with external radiation therapy only. 3 patients (nos 1, 3 and 4) with supraglottis tumours were treated using two opposing lateral ports, 8×10 cm fields, covering the larynx and the upper and middle cervical nodes. A tumour dose of 54 Gy was given in 27 fractions over 6 weeks. Patients with glottis tumours (nos 2 and 5) were treated with two anterior oblique ports, 6×6 cm fields, covering the larynx only. A tumour dose of 60 Gy was given in 24 fractions over 5 weeks. Toxicity was acceptable. All patients had a complete response and survived 10 years free of disease.

Surgical excision, irradiation or a combination of these, constitutes effective therapy for extramedullary plasmacytoma of the larynx. Smaller tumours may be removed at the time of laryngoscopy. The larger lesions are best treated with external irradiation [2–4, 8, 9]. Extensive or radical surgery (extended partial resection of the larynx or a total laryngectomy) is rarely necessary, as in most instances extramedullary plasmacytomas are radiosensitive [4, 8]. Currently most advocate radiation, either alone or with subtotal removal, as treatment of choice for almost all cases, particularly for the extensive infiltrative tumours [1–4, 9]. Surgery may be useful in the management of recurrences after radiation therapy.

Based on our experience and a review of the literature, it may be concluded that extramedullary plasmacytoma of the larynx treated with radiotherapy is associated with a very good prognosis. In 90% of cases, local control can be achieved [1, 2, 6, 8].

The doses required for the optimal management of extramedullary plasmacytoma of the larynx are not well established, but most authors recommend doses of 45–50 Gy or more [1, 2, 6]. Based on our experience, we propose doses of 50–60 Gy in 25–30 fractions over 5–6 weeks. Higher doses should be considered if there is extensive involvement or a poor response during the course of irradiation. Approximately 20% of patients with extramedullary plasmacytoma of the larynx suffer metastasis to lymph nodes in the neck [4, 8]. On the basis of these data, we electively treat the regional lymph nodes if the tumour is localised in the supraglottis.

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Table 1. Patient characteristics and management

No.	Sex	Age (years)	Symptoms	Site of lesion	Treatment
1.	Male	34	Hoarseness	Supraglottis	1968, 250 kv, two opposing lateral ports, 54 Gy in 27 fractions
2.	Male	50	Hoarseness	Glottis	1975, ⁶⁰ Co, two anterior oblique ports, 60 Gy in 24 fractions
3.	Male	36	Asymptomatic	Supraglottis	1976, ⁶⁰ Co, two opposing lateral ports, 54 Gy in 27 fractions
4.	Female	68	Hoarseness	Supraglottis	1985, ⁶⁰ Co, two opposing lateral ports, 54 Gy in 27 fractions
5.	Male	48	Hoarseness	Glottis	1986, ⁶⁰ Co, two anterior oblique ports, 60 Gy in 24 fractions