OUTCOME OF PATIENTS WITH PLASMACYTOMA OF THE SKULL BASE, A META ANALYSIS

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Skull Base-Journal of neurological surgery B.

INTRODUCTION

Extramedullary plasmacytomas (EP) are rare tumors. Most of them are reported as solitary lesions. More than 90% of EPs originate in the head, neck, and upper respiratory tract, and affected tissues include the nasal cavity, sinuses, oropharynx, salivary glands, and larynx. Less than 2% of solitary plasmacytomas originate from the skull base and the sphenoid sinus. In this study we describe the clinical manifestations and the efficacy of treatment for this tumor aiming to better define the most appropriate therapeutic protocol.

METHODS

A systematic electronic literature database search of PubMed. The searches were conducted using the Medical Subject Heading (MeSH) terms (plasmacytoma) AND (skull base OR base of skull) AND (survival). Reference lists of retrieved manuscripts were hand-searched for additional publications. Publications in a language other than English were excluded. The full text of potentially relevant articles was reviewed to assess their suitability for inclusion in this meta-analysis. Criteria for study population inclusion were patients with plasmacytoma of the skull base, primary or recurrent, and available outcome data including survival or local control rate. The Main outcome measures were overall survival (OS) and disease-specific survival (DSS).

RESULTS

The study cohort consisted of 47 patients, 26 (55.3%) of which were males. The patients ranged in age from 28 to 85 years old (mean 66.3). The tumor originated from the clivus and sphenocilval region in 28 (59.5%) patients, nasopharynx in 10 (21.2%) patients, petrous apex in 5 (10.6%), and from the orbital roof in 4 (8.5%) patients (Figure 1). The chief complaint at presentation ranged from recurrent epistaxis to VI cranial nerve palsy according to the site of tumor. Twenty two (46.8%) patients had surgical treatment and the other 25 (53.2%) patients received radiation therapy. Of the patients treated with surgery, 11 (50%) received adjuvant radiotherapy. The patients whom their disease progressed to multiple myeloma received chemotherapy. The 2-year and 5-year OS of the entire cohort were 78% and 59%, respectively. The 2-year and 5-year DSS were 97% and 93%, respectively. Figure 2a shows the Kaplan-Meier survival analysis. The 2-years OS of patients with multiple myeloma was similar to that of patients with plasmacytoma alone (P=0.54, Figure 2b).

Figure 1. Sites of origin of the plasmacytoma.

Figure 2. Kaplan-Meier survival analysis.

CONCLUSIONS

Skull base plasmacytoma is a rare disease. The presence of multiple myeloma was associated with worse survival. The mainstay of treatment is based on radiation therapy, but when total resection is feasible, endoscopic resection is a valid option.

This research was supported by the ICRF Barbara S. Goodman endowed research career development award (2011-601-BGPC) and a grant from the US-Israel Binational Science Foundation, Israeli Science Foundation, Ministry of Health and the Israel Cancer Association. No other financial disclosures from the authors are to be made.