Small cell neuroendocrine carcinoma of the nasal cavity and paranasal sinuses: The role of surgery

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Introduction: Primary small cell neuroendocrine carcinoma (SNEC) of nose and paranasal sinuses is an extremely rare malignant tumour known for its aggressive clinical course, high rate of recurrence and poor prognosis.

Objective: Aim of this study is to analyse the clinicopathological features of SNEC of the nasal cavity and paranasal sinuses and to assess the treatment results of surgery with chemoradiation/non-surgical management and also to look at the rate of recurrence among these patients.

Method: The medical records of 14 patients presenting with nasal and paranasal SNEC at our institution from 2001 to 2017, were analysed to determine the clinical features, treatment results and the recurrence rate of the disease.

Results: Patient data were obtained from the clinical records of the patients with SNEC who attended our clinic from 2001 to 2017. Twelve of the patients were male and two were female, with a mean age at presentation of 55 years (range: 22 to 75 years). Patients' staging for nasal cavity malignancy was: T2, three; T3, two and T4, nine; N0, twelve; N2, two; M0, thirteen; and M1, one. Immunohistochemistry proved useful for diagnosis in 14 cases. Twelve cases were positive for cytokeratin, 14 for chromogranin and 11 for neuron-specific synaptophysin. Five patients underwent surgery, one had endoscopic craniobdial resection and four patients had endoscopic clearance from the nasoethmoid region. Chemoradiation was given to eleven patients and radiotherapy was given to three patients. Recurrence occurred in 8 cases. One patient had visceral metastases and one had recurrent cervical lymph node. Seven of the patients died within five years of onset of the disease. The recurrence rate was more among the patients who underwent nonsurgical management compared to those patients who underwent surgery followed by chemoradiation.

Conclusion: Small cell neuroendocrine carcinoma of the sinonasal tract is an uncommon neoplasm with aggressive clinical behaviour. They can be distinguished based on immunohistochemical characteristics. Recurrence is frequent and the prognosis is poor. However, the surgical treatment followed by chemoradiation gives the best result for such aggressive malignancy.

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Biography

Elizabeth Mathew Iype has completed her MBBS, DLO from Medical College Trivandrum, University of Kerala, Dip NB (Otolaryngology) Medical College Trivandrum, Department of Health and Family Welfare, New Delhi and PhD (Head and Neck Oncology) from Regional Cancer Center Trivandrum, University of Kerala. She is an Additional Professor of Surgical Oncology at Regional Cancer Center, Trivandrum, India. She is doing many clinical and basic science researches in Head and Oncology Surgery, both as a Principal Investigator and Co-investigator. She is the Reviewer of journals for Oral Oncology, Indian Journal of Cancer, Laryngoscope and Indian Journal of Surgical Oncology. She has published several scientific articles in both national and international indexed journals.

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