

RECURRENT NASOPHARYNGEAL SQUAMOUS CELL CARCINOMA



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RECURRENT NASOPHARYNGEAL SQUAMOUS CELL CARCINOMA

DEMOGRAPHICS

Sex: Male
Age: 64 years
Histology: Squamous Cell Carcinoma - IV (T4N0)

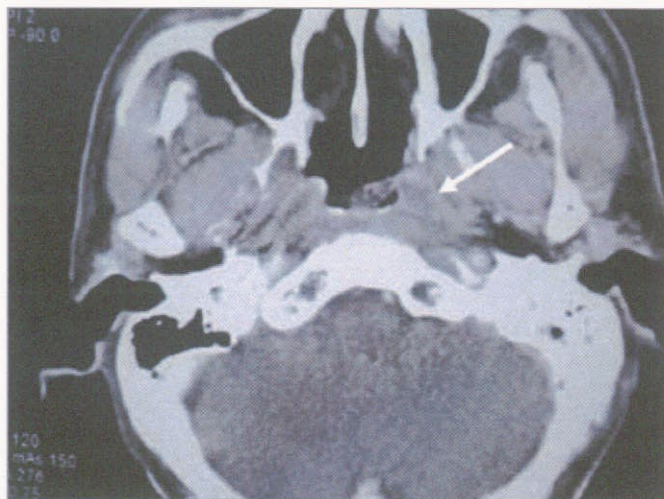
CLINICAL HISTORY

Referred by: Head & Neck Surgery
Previous Treatment: Conventional radiotherapy to the nasopharynx

Case History

The patient was referred to Korea Institute of Radiological and Medical Sciences complaining of headache and dizziness that had been present for four months. He was diagnosed with stage IV (T4N0) nasopharyngeal carcinoma (NPC) with skull base involvement. The patient was treated with conventional radiotherapy as follows: 70 Gy over 7 weeks to the nasopharynx and 54 Gy over 6 weeks to the neck. Following treatment, there was no visible tumor mass on endoscopic examination.

The patient continued to suffer from headaches. Eight months after the initial presentation, CT and PET examination revealed a recurring mass in the left Rosenmuller fossa of the nasopharynx. The mass was confirmed by endoscopy. No signs of cranial nerve involvement were identified and the patient was referred for CyberKnife® treatment.



Pre-CyberKnife CT scan shows recurrent lesion in the left wall of the nasopharynx.

CyberKnife Treatment Rationale

Radiotherapy is the standard treatment for patients with non-metastatic NPC. The local control rate of NPC depends on the T-stage of the disease. For stages T1 and T2, the local control rate ranges from about 75 to 90%; for stage T4, the local control rate ranges from about 40 to 65%.^{1,2,3}

The standard treatment for recurrent NPC following external beam radiotherapy is re-irradiation. Salvage surgery to the nasopharynx is a very difficult procedure and is associated with high mortality and morbidity. If the tumor is located in or has invaded the skull base, surgical options are even further limited. Despite aggressive therapy, most patients with recurrent NPC experience poor tumor control and a significant risk of late complications from repeat radiotherapy.^{4,5}

Radiosurgery is a practical alternative for both boost therapy after external beam radiotherapy and salvage therapy in patients with recurrent NPC. In one study all 23 patients receiving linac-based stereotactic radiosurgery as a boost following fractionated radiation therapy were locally controlled at a mean follow-up of 21 months.⁶ Two-year local control rates of linac-based radiosurgery for salvage therapy after previous external beam radiotherapy were reported in two studies to be 72-74%.^{7,8} In our experience at KCCH, the local control rate of NPC treated with CyberKnife radiosurgery is about 80% without serious complications.