THE RELATIONSHIP BETWEEN THE INVASION OF PARAPHARYNGEAL SPACES AND THE INVOLVEMENT OF CERVICAL NODES AND POSTERIOR GROUP CRANIAL NERVES IN NASOPHARYNGEAL CARCINOMA

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Two hundred cases of nasopharyngeal carcinoma (NPC) admitted to this department from Feb. 1985 to May 1988 were analysed according to the CT scanning and clinical findings of the primary lesions prior to radiotherapy. The results showed that involvement of parapharyngeal space was very common in NPC, about 80% (160/200 cases); particularly unilateral or bilateral retro-styloid spaces, about 69.5% (139/200 cases). It was proposed that patients with NPC had a high incidence of ipsilateral cervical node metastasis. Contralateral cervical node metastasis was rare. The development of cervical node metastasis in NPC has two modes: one is direct infiltration of the retro-styloid space by the lesion; the other is along the nasopharyngeal lymphatic rete. The data also showed that patients with NPC who presented symptoms of IX – XI cranial nerve paralyses always had ipsilateral or bilateral retro-styloid space infiltrations.

In recent years, as the use of CT scanning in nasopharyngeal carcinoma (NPC) diagnosis, the problems related to the invasion of the parapharyngeal spaces (PS) in nasopharyngeal carcinoma were extremely emphasized by many radio-oncologists. 1-3 Few reports appeared in the literature concerning the relationship between the invasion of parapharyngeal spaces and the involvement of cervical nodes and posterior group cranial nerves in NPC. In order to explore this relationship 200 patients with NPC were analysed from Feb. 1985 to May, 1988.

MATERIALS AND METHODS

Clinical Materials

All data were collected from the patients admitted to the department from Feb. 1985 to May, 1988. Only 200 patients with CT scanning prior to radiotherapy were included.

Sex and Age: Of the 200 patients, 153 were
male, 47 female, with a ratio of 3.26:1.16 were the age ≤ 30. 175 were the age from 31 to 60. 9 were the age from 61 to 70.

Histologically Patterns: 170 poorly differentiated squamous cell carcinomas, 16 vesicular nuclear cell carcinomas, 3 undifferentiated carcinomas, 11 other type.

Clinical Stages: According to the TNM staging classification of the Second National Cancer Conference in Changsha (1979), there were T0 1 case, T1 3 cases, T2 103 cases, T3 58 cases, T4 3 cases; and N0 58 cases, N1 78 cases, N2 65 cases, N3 7 cases. In the study, T2 cases were than T1 because the TNM staging was only based on clinical findings without referring to the CT scanning, so that the possibility of the invasion of parapharyngeal spaces was not considered in many cases and they may be classified as T2.

Methods

The clinical manifestations were analysed according to the standard of the clinical symptoms, signs and the CT scanning findings prior to radiotherapy.

The evidences of the invasions of parapharyngeal spaces were based on the reports of CT scanning.

According to the figure of CT cross scanning for the nasopharynx, the parapharyngeal spaces were divided into the prestyloid and the retro-styloid spaces by drawing a line from the styloid process to Rosemuller's fossa. The former included the soft tissues and spaces, the latter included the retropharyngeal space and the carotid sheath region (Figure 1).

RESULTS

In this series, the patients presenting the invasion of parapharyngeal spaces accounted for 80% (160/200 cases), while those with normal parapharyngeal space only accounted for 20% (40/200 cases). The involvement of cervical nodes was about 75% (150/200 cases) (Table 1).

The unilateral invasion of the parapharyngeal spaces usually showed an involvement of the pre-styloid and the retro-styloid regions. 28 of 45 patients with the left and 52 of 78 patients with the right parapharyngeal spaces extension simultaneously accompanied with the involvement of the both regions. But near half (19/37 cases)