

Metastasis of nasopharyngeal carcinoma to scalp

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Nasopharyngeal carcinoma is a common malignant tumor in Asia (especially in Southern China, Taiwan, Southeast Asia) and Eskimo but rare in North America. Nasopharyngeal carcinoma usually metastasize distantly to bone (especially spine and pelvis), lung and liver.

This report describes a case of nasopharyngeal carcinoma with scalp metastasis. This rare situation has not previously been described in the medical literature. Metastasis of nasopharyngeal carcinoma should be considered in the differential diagnosis of mass in scalp.

Key words : *Nasopharyngeal carcinoma, Metastasis.*

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มะเร็งหลังโพรงจมูก พบมากในเอเชีย (โดยเฉพาะประเทศจีนตอนใต้ ไต้หวัน เอเชียตะวันออกเฉียงใต้) และชาวเอสกีโม แต่จะพบน้อยในอเมริกาเหนือ มะเร็งหลังโพรงจมูกมักจะแพร่กระจายระยะไกลไปบริเวณกระดูก (โดยเฉพาะกระดูกสันหลัง และกระดูกเชิงกราน) ปอดและตับ

บทความนี้เป็นการรายงานผู้ป่วย 1 ราย ที่เป็นมะเร็งหลังโพรงจมูกและมีการแพร่กระจายไปยังบริเวณหนังศีรษะซึ่งยังไม่เคยมีการรายงานมาก่อนในวารสารทางการแพทย์

ดังนั้นในการวินิจฉัยแยกโรคก่อนที่พบบริเวณหนังศีรษะควรคำนึงถึงการแพร่กระจายของมะเร็งหลังโพรงจมูกไว้ด้วย

Nasopharyngeal carcinoma is a disease with a high potential of distant metastasis, especially to bone and the liver.⁽¹⁾

Between 1987-1992 Huang C.J. et. al. in reviewing of 629 cases of nasopharyngeal carcinoma during found that 125 cases had distant metastasis. Metastasis to different organs were as following: bone (75%), lung (46%), liver (38%), retroperitoneal lymph node (10%).⁽²⁾ Metastasis to the brain⁽³⁾, epidural metastasis of spinal cord⁽⁴⁾ and choroid metastasis⁽⁵⁾ were rare. Metastasis to scalp has not been previously described in the medical literature.

Case report

A 23 year-old Thai female presented at the out-patient department of Chulalongkorn Hospital with 2 week's history of right neck mass. She denied of epistaxis, nasal obstruction or other symptoms

Physical examination revealed a firm and fixed right upper jugular lymph node measuring 3.5 cm. in diameter. Nasal cavity and nasopharynx were normal looking. Otoloscopic examination showed normal tympanic membranes. There were no cranial nerve deficits.

Fine needle aspiration biopsy (FNA) of the neck mass and punch biopsy of nasopharynx were performed. Pathology of nasopharyngeal mucosa was consistent with non-keratinizing squamous cell carcinoma and FNA was consistent with

metastatic squamous cell carcinoma. Metastatic work up was performed by chest x-ray, liver function test and bone scan. Staging by AJCC (American Joint Committee for cancer staging, 1977) classification was T1N2M0 non-keratinizing squamous cell nasopharyngeal carcinoma.

The patient was treated by external beam radiotherapy 70 Gy. at Bangkok Cancer Center Hospital followed by 3 courses of chemotherapy (Carboplatin and 5FU). Four months after complete chemotherapy she developed a soft and non tender mass measuring 8x8 cm. in diameter on the right side of the scalp but there was no palpable neck mass. Computerized tomography scan (CT scan) demonstrated only soft tissue mass at right scalp and no pathology of skull. (Figure 1.)



Figure 1. The patient with a soft and non tender mass measuring 8x8 cm. in diameter on the right side of the scalp.

Biopsy of the nasopharynx was repeated and disclosed no malignancy. Incision biopsy of the mass at scalp was then performed and revealed metastatic squamous cell carcinoma of scalp.

The patient died a month later from distant metastasis to soft tissue at frontal and medial canthus regions, right frontal bone, T12, shaft of right femur and brain during receiving supportive treatment by chemotherapy.

Discussion

Nasopharyngeal carcinoma is a common malignant tumor in Asia but relatively rare in the rest parts of the world.

The World Health Organization (WHO) has defined three histologic classes of nasopharyngeal squamous cell carcinoma.

1. Squamous cell carcinoma (WHO type 1), which comprises 25% of all nasopharyngeal carcinomas. WHO type 1. is not associated with an increased incidence of Epstein-Barr virus antibodies.

2. Nonkeratinizing carcinoma (WHO type 2) accounts for 12% and the patient in this report was in this group.

3. Undifferentiated carcinomas (WHO type 3) accounts for 63%⁽⁶⁻⁷⁾

About 60 percent of patients present with a neck mass⁽⁶⁾ (Figure 2.), and in many patients, this is their only symptom like the patient in this report.

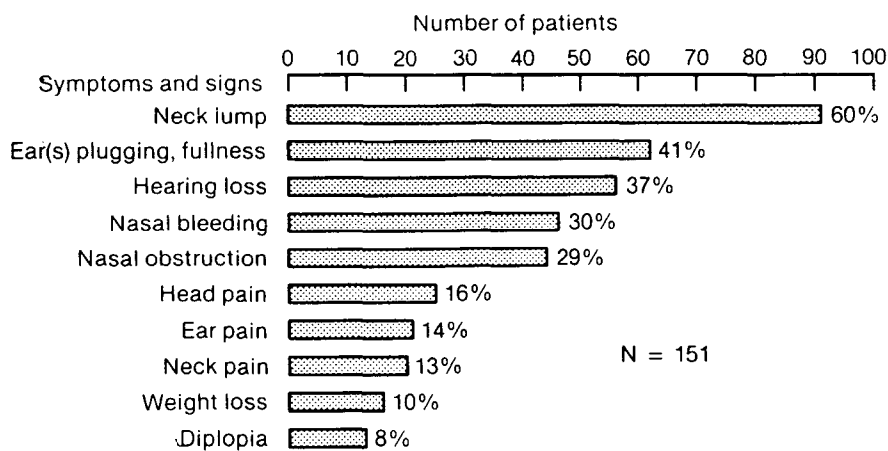


Figure 2. Symptoms and signs of NPC (WHO 1,2 and 3): frequency at diagnostic in Mayo Clinic series. N, Number of patients. (From Neel HB 3. Taylor WF: Clinical presentation and diagnosis of nasopharyngeal carcinoma: current status. In Prasad U, Ablashi D, Levine P, editors: Nasopharyngeal carcinoma: current concepts, Kuala Lumpur, 1983. University of Malaya Press. By permission).

Fortunately, distant metastasis at initial presentation occurs in less than 5 percent. Bone, lung and liver are the most common sites of

metastatic deposits,⁽⁸⁻⁹⁾ but metastatic to scalp like this case has never been reported.

The standard treatment for nasopharyngeal carcinoma is external beam radiation therapy to a dose of 60 to 70 Gy. in 6 to 7 weeks, five times a week, at 2 Gy. fraction. Few prospective randomized studies have been performed comparing combined chemoradiotherapy versus radiotherapy alone; those that have been done show no benefit of chemotherapy. Several nonrandomized studies with small numbers of patients suggest an improvement in the survival when chemotherapy has been combined with radiotherapy. Cisplatin and 5-FU are the favorite agents. Thus, the role of chemotherapy in nasopharyngeal cancer is limited to treatment of systemic metastasis or recurrence where surgery or a second course of radiotherapy is contraindicated.⁽⁹⁾

This case represents an isolated, clinical metastasis to scalp of post-chemoradiotherapy nasopharyngeal carcinoma. The route of metastasis was most likely from blood stream, because the patient has multiple organ involvement. Radiotherapy was successful only for locoregional control but chemotherapy cannot prevent distant metastasis. Even though this case was a rare clinical representation, metastatic nasopharyngeal carcinoma should be included in the differential diagnosis of a scalp mass.

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