Case Report

NK/T Cell Lymphoma, Nasal Type with Sinonasal Mass and Palatal Ulcer: A Clinical Case Report and Review of Treatment

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Extranodal Nasal NK/T cell lymphoma, relatively uncommon type of non-Hodgkin's lymphoma, is highly aggressive disease with poor outcomes. Early stage disease may response to radiotherapy alone. However the treatments are usually chemotherapy and radiotherapy combination and late stage disease may not response to any available therapy. We reported a 45-year-old woman with extranodal nasal type NK/T cell lymphoma. The patient presented with chronic nasal stuffiness and mucous bloody discharge. The nasal mass is extensively involved periorbital and sinonasal soft tissue. Due to the extensively involved of tumor, combination chemotherapy was used to induce response. This patient was involved by complicated infection and palatal ulcer with likely perforation. The salvage chemotherapy was given and the treatment of NK/T cell lymphoma from other reports and literatures were reviewed.

Keywords: *Lymphoma, NK/T cell, Nasal type*

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NK/T cell lymphoma are neoplastic disorder of lymphoid tissue. These tumors prevalence is not high in the western country, but are commonly in south East Asia, Central, and South America[1]. Hong Kong and South America reported range of nasal lymphoma range from 2.6-8% of all NHL, which 45% are possible NK/T Cell lymphoma[2]. In Thailand, there are few reports of NK/T cell lymphoma[3-6]. Presentation of these group of lymphoma usually locally destructive, midline of upper aerodigestive region including nasal cavity, nasopharynx, and extra-upper aerodigestive tract.

Objective

To present an uncommon clinical presentation of NK/T cell lymphoma and review the modality of treatment for improving the rational and modality of treatment of nasal NK/T cell lymphoma in the future.

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Case Report

Forty-five-years-old female who presented with chronic nasal snuffiness came to receive a medical treatment as allergic rhinitis for one and a half year. For the important visit when lymphoma diagnosed, she came with epitaxis. At that time, complete ENT examination and nasal packing were done. The nasal examination found total occlusion of Rt. nasal cavity by soft tissue mass and the rest of physical examination was unremarkable. Nasal mass biopsy and CT scan of nasal and paranasal area were done. CT scan showed soft tissue density in both ethmoid sinus and nasal cavity with highly proteinaceous contents in both maxillary, frontal and sphenoidal sinuses (Fig. 1). Histopathology of nasal tissue biopsy showed atypical small to medium size lymphoid cells. The tumor cells were immunohistologically positive for CD3, CD56, GranzymeB, and EBV-LMP1, but negative for CD5, CD4, and CD8 (Fig. 2). The findings were consistent with NK/T cell lymphoma of nasal cavity, and the treatment was started by chemotherapy because of large tumor mass involved nearby both ocular areas. After 4 cycles of CHOP (Cyclophosphamide 750 mg/m2 D1,

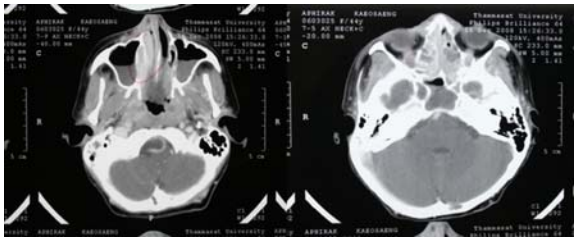


Fig. 1

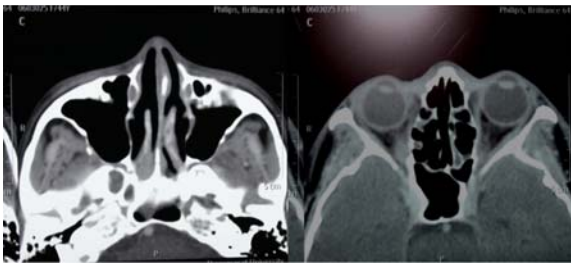
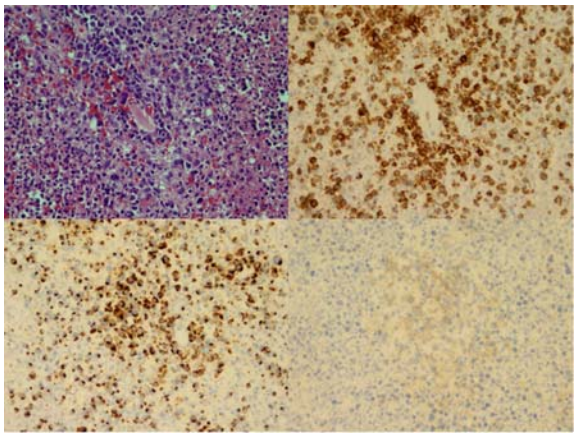


Fig. 3



LU H&Ex40 LL GranzymeBx40 RU CD3x40 RL CD56x40

Fig. 2

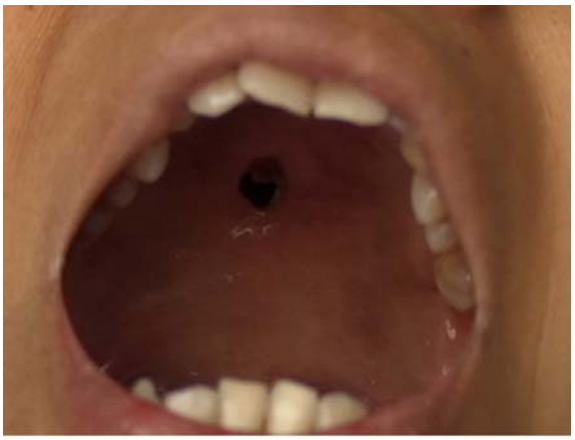


Fig. 4

Doxorubicin 45 mg/m2 D1, vincristine 1.2 mg/m2 D1, and prednisolone 100 mg/day D1-D5), the mass was still detected by the follow-up CT scan of paranasal sinuses with a hard palate involvement and causing perforation. The high dose chemotherapy regimen, ESHAP (Etoposide 60 mg/m2 D1-D4, Methyprednisolone 100 mg/m2 D1-D4, Cytarabine 2,000 mg/m2 D5, and Cisplatin 25 mg/m2 D1-D4), was given for 2 cycles with G-CSF support and best supportive care. Nasal mass was dramatically decreased more than 80-90% until CT scan can minimally detect the residual tumor (Fig. 3) after 3 cycles of high dose regimen, however she had persistent small perforation hole at hard palate where successfully repaired when infection gone (Fig. 4).

Discussion and review literature

T- and N/K cell lymphomas including many entities in WHO classification 2008. Extranodal NK/T cell lymphoma, (ENKTL) nasal type, including previous so called lethal midline granuloma is typically presented as mass destruction of midface, palate, and orbital walls. ENKTCL can involve skin, soft tissue, testes, GI tract, upper respiratory tract, and associated with hemophagocytic syndrome[1-8]. However, NK-T cell lymphoma can involve other organ such as soft tissue, lung, gastrointestinal tract, and testis[9]. The diagnosis of this type of lymphoma is mainly by using immunohistochemistry[2]. ENKTCL is characterized by expression of T-cell marker CD2, NK cell marker CD56, Granzyme B and EBV and negative surface CD3, but expressed intracellular CD3. In our case, the mass was originated in nasal cavity and invaded both mucosal sinus.

Nasal NK/T cell lymphoma has a highly aggressive clinical manifestation with poor outcome and short survival times. Patients with stage I/II disease are response to radiation treatment[8,10-15]. Multiagent chemotherapy (CHOP regimen) with or without involved field radiation appeared to be another effective treatment[13]. When compared to other type of lymphoma of head and neck, the response rate seems lower and the local relapse rates were high in NK/T cell type (21.4%). A complete response is estimate 56% of

Table 1. Second line treatment of natural killer/T-cell lymphoma

Author[Ref]	No. of Patients	Treatment regimen	Outcome, F/U
Obama et al[20]	1	L-asparaginase-based regimen	CR 1/1, 18 mo.
Hyakuma et al[21]	1	L-asparaginase-based regimen	CR 1/1, -
Sakamoto et al[22]	1	L-asparaginase-based regimen	CR1/1, 24 mo.
Yokoyama et al[23]	1	L-asparaginase-based regimen	CR1/1, 34 mo.
Berk et al[24]	1	L-asparaginase-based regimen	CR 0/1, -
Yamaguchi et al[25]	6	L-asparaginase-based regimen	CR1/6, 7 mo
Yong et al[26]	18	L-asparaginase, vincristine, and dexamethasone	CR, 55.6%; 5-year OS, 55.6%
Nagafuji et al[27]	1	CHOP → L-asparaginase	Second CR (duration > 18 months)
Matsumoto et al[28]	1	L- asparaginase	Second CR (duration > 8 months)
Kim et al[29]	16	Autologous hematopoietic transplantation with BEAM	CR, 75%; 2-year RFS, 25.8%; 2-year OS, 71.3%
Suzuki et al[30]	16	Autologous hematopoietic transplantation	CR, 56.3%; 2-year OS, 56.3%

Modified from Ref 20, 21; CR, complete remission

cases. Median survival reported as 12.5 months and of the present of lymphoma cell dissemination, the survival reported less than 6 months[16,17].

Many salvage regimens, as shown in Table 1, have been reported such as EPOCH, L-asparaginase-based chemotherapy, or modified CHOP regimen with methotrexate. For this patient, we gave 4 cycles of CHOP regimen but the tumor mass was still detected with hard palate involvement causing perforation. After we tried 3 cycles of ESHAP with growth factor support and best supportive care, the tumor size was much decreased.

Conclusion

There are few cases reported about NK/T cell lymphona especially palatal lesion and palate perforation like our case. This case luckily response to high dose combination chemotherapy with groth factor support, however this is only one case in one institute. In the future, high dose treatment for aggressive NK/T cell lymphoma should be done as clinical trial. For the perforating hole, the patient was consulted to dental surgeons to close that lesion by shilling method.

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ก้อนที่โพรงจมูก และไซนัสซึ่งทำให้เกิดแผลที่เพดานปากในผู้ป่วยมะเร็งต่อมน้ำเหลืองชนิดเอ็นเคเซล: รายงานผู้ป่วยและทบทวนการรักษา

นงลักษณ์ คณิตทรัพย์, นารี วรรณิสสร

มะเร็งต่อมน้ำเหลืองชนิดเอ็นเคเซลล์บริเวณโพรงจมูกและไซนัสพบไม่บ่อย และเป็นมะเร็งต่อมน้ำเหลืองที่มีอาการรุนแรง ผลการรักษาไม่ดี ในระยะต้นของมะเร็งต่อมน้ำเหลืองชนิดนี้อาจตอบสนองต่อรังสีรักษา อย่างไรก็ตามหากเป็นระยะที่สูงขึ้นการรักษาหลักจะเป็นเคมีบำบัดร่วมกับการฉายแสง ในรายงานนี้เป็นผู้ป่วยอายุ 45 ปี เป็นมะเร็งต่อมน้ำเหลืองชนิดเอ็นเคเซลล์ที่โพรงจมูกและไซนัสซึ่งทำให้เกิดแผลที่เพดานปาก ผู้ป่วยมาด้วยอาการคัดจมูกและน้ำมูกเรื้อรังบางครั้งมีน้ำมูกปนเลือด ก้อนที่โพรงจมูกขนาดใหญ่ เนื่องจากก้อนอยู่บริเวณเนื้อเยื่อรอบ ลูกตา โพรงจมูก และไซนัส ซึ่งเกรงว่าการฉายแสงจะมีผลต่อประสาทตา ผู้ป่วยจึงได้รับยาเคมีบำบัดเพื่อลดขนาดก้อน ซึ่งไม่ตอบสนองต่อเคมีบำบัดสูตร CHOP และเพดานปากทะลุ หลังการให้ยาเคมีบำบัด ขนาดสูงเนื้องอกจึงลด ขนาดลง พบปัญหาการติดเชื้อแทรกซ้อนในผู้ป่วย รายงานนี้จึงได้ทบทวนเปรียบเทียบการรักษาด้วยยาเคมีบำบัดขนาดสูงสูตรอื่น