



A rare case of nasal Mantle cell lymphoma

Nadir bir intranasal Mantle hücreli lenfoma olgusu

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A 56-year-old Caucasian man was referred to our clinic with the complaint of right sided unilateral nasal blockage which had been present for one year. Anterior rhinoscopy and computed tomography scan revealed a mass, filling the right nostril completely and lying in the right inferior meatus inseparable from the inferior turbinate. Following the biopsy, histopathological examination and immunohistochemical analyses, the diagnosis of Mantle cell lymphoma was established. To our knowledge, there have been no previous reports of a Mantle cell lymphoma presenting as an intranasal mass in the literature. In this article the clinical, radiological and pathological features as well as recent advances in treatment are discussed in the light of current literature.

Key Words: Immunochemotherapy; intranasal; Mantle cell lymphoma.

Elli altı yaşında beyaz ırktan bir erkek hasta, bir yıldır var olan sağ tek taraflı burun tıkanıklığı yakınması ile kliniğimize sevk edildi. Anteriyör rinoskopik muayenede ve bilgisayarlı tomografi incelemesinde, sağ burun deliğini tamamen kapatan ve alt konkadan ayırt edilemeyecek şekilde alt meatusa yerleşmiş olan kitle saptandı. Biyopsi, histopatolojik inceleme ve immünohistokimyasal analizler sonucunda hastaya Mantle hücreli lenfoma tanısı konuldu. Bilgimiz dahilinde literatürde burun içi kitlesi olarak bir Mantle hücreli lenfoma olgusu sunulmamıştır. Bu çalışmada klinik, radyolojik ve patolojik özelliklerin yanı sıra tedavideki son ilerlemeler de güncel literatür eşliğinde tartışıldı.

Anahtar Sözcükler: İmmunokemoterapi; burun içi; Mantle hücreli lenfoma.

Mantle cell lymphoma (MCL) is an uncommon type of non-Hodgkin's lymphoma (NHL) usually presenting at an advanced stage with systemic spread. Mantle cell lymphoma was recognized as a distinct type of NHL by an international consensus conference^[1] in 1992 and represents approximately 6% of all non-Hodgkin's lymphomas.^[2]

Non-Hodgkin's lymphoma of the sinonasal tract is uncommon in western populations, accounting for 0.2% to 2.0% of all NHL.^[3,4] However primary nasal lymphomas comprise 3%-10% of cases of NHL in the Chinese population.^[5]

CASE REPORT

A 56-year-old Caucasian man was referred to the ear nose throat (ENT) outpatient clinic with right sided unilateral nasal blockage for one year. This was associated with intermittent mild blood stained mucoid rhinorrhea. There was no response to treatment with nasal steroids and topical agents prescribed by his general practitioner. He had no history of orbital symptoms such as epiphora, pain, diplopia or redness. There was no past medical history of any significant illness. The patient was a wheel chair repairer by profession. He had never

smoked in his life and his alcohol consumption was minimal.

On examination there was a significant reduction of nasal airway patency in the right nostril. Anterior rhinoscopy revealed a friable mass filling the right nostril completely. Flexible or rigid nasal endoscopy was not possible due to complete occlusion of the nostril. The left nasal airway was patent and appeared normal on rigid endoscopy. The rest of the ENT examination was unremarkable. Ophthalmological examination did not reveal any evidence of ophthalmoplegia and the patient had normal visual acuity and colour vision.

A computed tomography (CT) scan of the nose and paranasal sinuses demonstrated an elongated soft tissue mass in the right inferior meatus inseparable from the inferior turbinate. The lesion extended into the right maxillary antrum through a defect in its medial wall. The lesion also appeared to have involved the nasolacrimal duct and was extending into the right lacrimal sac (Figure 1).

An examination and biopsy of this right nasal mass was performed under general anesthesia. Histological examination showed a lymphoma composed of small uniform lymphoid cells with clear cytoplasm arranged in diffuse sheets separated by fibrovascular septa (Figure 2).

Immunohistochemistry staining demonstrated a strong diffuse positivity with B-cell markers (CD20, CD79 and Bcl2). Bcl6 was mildly positive. CD3 and CD43 showed residual T-cells while CD5 was moderately positive and CD10 negative. Ki67 (a marker for cell proliferation) showed

a low proliferative index. Cyclin D1 was positive (Figure 3) confirming the diagnosis as Mantle cell lymphoma.

Systemic evaluation revealed bone marrow involvement. Significant lymphadenopathy in the neck, chest, abdomen and pelvis with bowel involvement was evident on CT scanning. The liver and spleen were not involved.

The patient was treated with intensive immunochemotherapy and stem cell support (according to the 2nd Nordic MCL Protocol); with rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone (R-CHOP) and is currently in complete remission. Following this treatment, the patient has been assessed and found to have complete resolution of his nasal symptoms with a good airway in his right nostril.

A review of English-language biomedical literature did not reveal any MCL arising either from the sinonasal mucosa or nasolacrimal duct. To our knowledge this is the first reported case of nasal MCL.

DISCUSSION

The clinical features of primary nasal lymphoma at presentation are nasal obstruction, unilateral and progressive epistaxis, hyposmia, and nasal swelling or mass.^[6] As in this case, patients with nasal lymphoma may have experienced long-standing symptoms with initial examination failing to reveal the lymphoma. The clinical signs could be a diffuse erythematous swelling inside the nasal cavity covered with exudates and crust or in some advanced

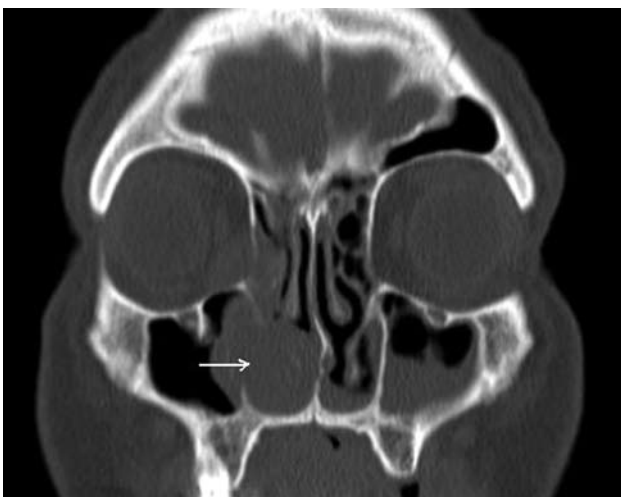


Figure 1. Coronal computed tomography scan of paranasal sinuses, showing the intranasal mass (white arrow).

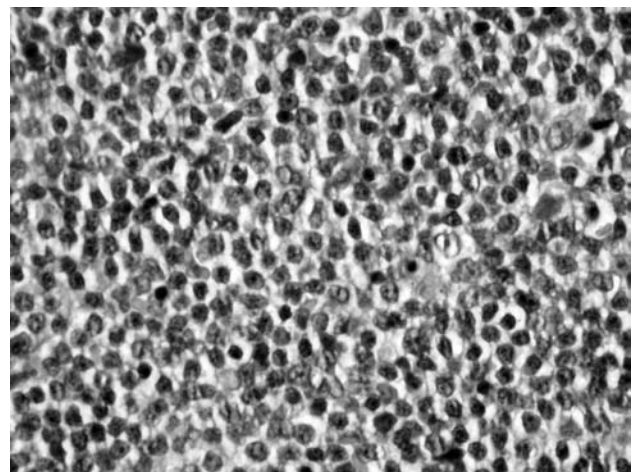


Figure 2. Histology of nasal mass (H-E x 400) shows a relatively monomorphic population of neoplastic lymphoid cells.

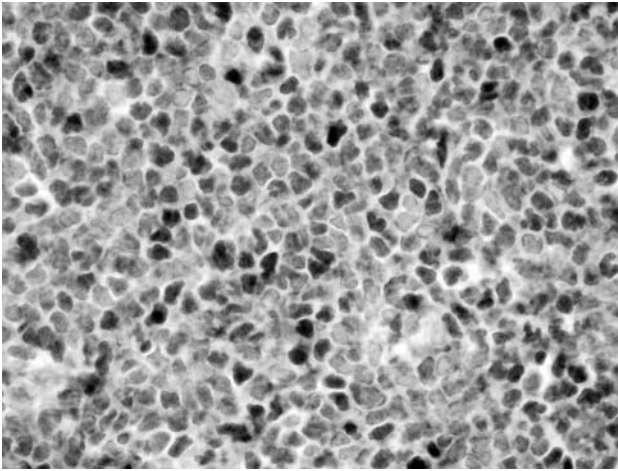


Figure 3. Lymphoid cells show positive nuclear staining with Cyclin D1 (H-E x 400), the immunohistochemical hallmark of Mantle cell lymphoma.

cases there may be extensive ulceration and necrosis.^[5] Local tumor extension reaches to the maxillary sinus, ethmoid sinuses and nasopharynx in 42%, 36%, and 25% of patients, respectively.^[7] Involvement of maxillary sinus can cause facial pain, infraorbital anesthesia, facial swelling or distortion of the cheek. Erosion of the medial wall can lead to epistaxis and epiphora due to nasolacrimal duct obstruction. Trismus, maxillary and mandibular trigeminal nerve deficits may be caused by posterior wall destruction and spread into the pterygopalatine and infratemporal fossae. Inferior wall destruction leads to loosening of teeth, ill-fitting dentures and ulceration of palate. Involvement of the orbit superiorly gives rise to proptosis and diplopia. In advanced cases extensive ulceration and necrosis producing midfacial destructive disease may be present.^[5,8] The local and systemic extent of tumor spread could be established by endoscopy and imaging with CT and magnetic resonance imaging (MRI) scanning. The histological diagnosis is sought by biopsy of the lesion.^[5]

Differential diagnosis of a sinonasal mass includes benign and malignant tumors. The common benign lesions are osteoma, chondroma, fibrous dysplasia, haemangioma, leiomyoma and schwannoma. The common malignant tumors are squamous cell carcinoma, adenocarcinoma, adenoidcystic carcinoma, esthesioneuroblastoma, sinonasal undifferentiated carcinoma, malignant melanoma, haemangiopericytoma and lymphoreticular neoplasms.^[9] Chronic granulomatous conditions like Wegner's granulomatosis, sarcoidosis, tuberculosis and syphilis can also involve the nose

and paranasal sinuses. Nasal T-cell lymphoma needs to be considered in the differential diagnosis of destructive midline sinonasal lesions.^[10]

Mantle cell lymphoma usually presents with lymph node enlargement. It can spread to other tissues such as bone marrow, liver and gastrointestinal tract. Cyclin D1 expression is a hallmark of MCL. This protein that promotes cell division and growth is detected by immunohistochemistry to confirm the diagnosis of MCL.^[11] Over-expression of cyclin D1 is usually caused by a translocation between chromosomes 11 and 14. Detecting this chromosomal translocation can also be used to establish the diagnosis. The classical immunophenotypes of MCL are CD5+, CD19+, CD10-, CD23-/weakly +, FMC7+.^[12]

Most patients with MCL present with advanced-stage extranodal disease involving the bone marrow, spleen, gastrointestinal tract or circulating lymphoma cells in peripheral blood. Untreated MCL tends to progress rapidly.^[13,14] In the head and neck, MCL accounts for a small fraction of Waldeyer's ring lymphomas and the tonsil maybe the sight of initial presentation. Rarely MCL may involve the orbit, eye lid, conjunctiva, lacrimal gland, lacrimal sac, iris^[15] and floor of the mouth.^[16]

Mantle cell lymphoma was considered aggressive and incurable as it typically relapses after conventional chemotherapy regimens such as CHOP (cyclophosphamide, doxorubicin, vincristine and prednisolone) with a median survival of three to five years. Recent clinical trials have been performed using dose-intensified immunochemotherapy with peripheral blood stem cell transplantation to achieve a high proportion of responses and complete remissions. The results of the recently published Nordic trial showed overall and complete response rates of 96% and 54% respectively. The projected six-year overall, event-free, and progression-free survival rates were 70, 56 and 66%, respectively with no relapses occurring after five years.^[17] Compared with conventional treatment this trial has shown a significant improvement in long term progression free survival of MCL.

Treatment options for MCL also depend on the age and the general condition of the patient. Patients who are unable to tolerate aggressive treatment either because of age or of comorbidities, are treated with palliative chemotherapy of reduced intensity, usually with single agent.^[18]

In conclusion, we report a rare case of an extranodal presentation of MCL as an intranasal mass which has not been reported previously in the English written literature. Although MCL is considered to be incurable, recent trials with intensive immunochemotherapy and stem cell support have shown encouraging results.

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