An Unusual Case of Large B-cell Lymphoma of the Sinonasal Tract in a Ninety Year Old Woman

Abstract

Lymphoma accounts for 3 to 5% of malignant tumours, non-Hodgkin’s lymphoma (NHL) accounts for 60% of all lymphoma. NHL of the sinonasal tract is a uncommon neoplasm that can be morphologically difficult to distinguish from non-neoplastic destructive lesions or malignant neoplasm. Only Immuno histochemistry could give a definite diagnosis. These represent 1.5 to 15% of NHL in the United States, 2.6 to 6.7% of all lymphoma in Asia. B cell phenotype are most frequently found in the Western Hemisphere while T cell lymphomas are found in Asian countries. B-cell lymphoma of sinonasal tract occur in 6th to 8th decade of life and have a better prognosis. Review of the literature shows that early diagnosis and prompt treatment with local radiation (XRT) or combined modality treatment (CMT) have shown good prognosis.

Keywords: Non Hodgkins lymphoma, diffuse large cell B-cell lymphoma (DLBCL), disease free survival (DFS), overall survival (OS), epistaxis, rapid rhino® (Arthrocare ENT products)

Case Report

A ninety year old lady presented in the emergency room (ER) of Campbellton Regional Hospital in New Brunswick, Canada with right nasal obstruction and pain over her right cheek and a nose bleed that she has been experiencing for the past six months. She also had anosmia, headache, blocked right ear and right epiphora. She was suffering with chronic renal failure.

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and chronic anaemia. The patient had lost weight and had symptoms of nocturnal sweating and fever.

Examination of right nasal cavity showed fleshy haemorrhagic polypi and total obstruction. She had mucopurulent discharge. Her left nasal cavity was patent and there was no polyp. There was mild tenderness over her right cheek. She was anemic with Hb 6.5gm/dl. Her blood urea and creatinine was high due to chronic renal failure. Emergency CT scan (Figure 1) showed diffuse homogeneous shadow in the right nasal cavity compressing septum to the left and homogenous opacity in the right maxillary, ethmoidal and frontal sinuses. There was blocking of middle meatal complex, ethmoidal sinuses and frontal recess on the right side.

In the ER her nose was packed with Rapid Rhino® to control the epistaxis and was transferred to the surgical ward and transfused with a couple of units of blood to correct the haematocrit and intravenous antibiotics ceftriaxone 2 gm every 24 hrs was given for 72 hours. She was transferred to the operating room (OR) for the biopsy of fleshy polypi and ethmoidal, frontal recess and middle meatal clearance. The nasal cavity was again packed with Rapid Rhino® for 48 hours.

The biopsy was reported as large B-cell lymphoma (Figure 2)
and the patient was transferred to the oncologist in Quebec, Canada as the patient was from that region. Unfortunately the patient refused radiation and combined-modality treatment (CMT) with oncologist and died after four months from diagnosis.

Discussion

Lymphoma of the nasal cavity and paranasal sinuses are uncommon. Most of the malignancies in the sinonasal tract are carcinoma. Lymphoma of sinonasal tract are difficult to differentiate from undifferentiated (anaplastic) carcinoma, immunohistochemistry is required for reaching a diagnosis. They could appear heterogenous with respect to pathologic and clinical behaviour. Their rarity and nonuniformity of treatment makes understanding the natural history and treatment difficult. Diffuse Large B-cell lymphomas (DLBCL) are common type in B-cell lymphoma and their incidence is more in maxillary sinus followed by ethmoidal sinus and nasal cavity, very rarely reported in frontal sinus.

The patient can present with nasal obstruction, anosmia, epistaxis, mucopurulent discharge and headache or pain over the cheek. Most of the patients are in their 6th to 8th decade of life. They can also have general symptoms like loss of weight, nocturnal sweating and fever.

Macroscopically the tumour consists of greyish white to greyish brown soft tissue with focal area of haemorrhages.

Microscopically fragments of tissues of uniform small and large cells arranged in diffuse pattern. These cells possess mild to moderate basophilic cytoplasm and hyperchromatic nuclei, condensed chromatin, irregular and cleaved nuclear outline with 1 to 2 nucleoli. Area of haemorrhage and necrosis is also seen along with fibrillar material in the background. In immunohistochemistry slides the proliferation shows strong staining for leukocyte common antigen (CD45) and the B-cell marker (CD10).

Lymphoma of sinonasal tract have variable behaviour and may
be invasive in nature, though B-cell lymphoma have claimed a better prognosis. Some published studies suggest that radiation alone for early stage disease provides good local and regional control. Chemotherapy did not improve on relapse rate and only used for extensive disease. Chemotherapy was three cycles of cyclophosphamide, doxorubicin, vincristine and prednisone-based regimen.

More recent studies have shown combine-modality treatment (CMT) with chemotherapy and local-regional radiation; provide significant improvement in disease-free survival (DFS) and overall survival (OS) especially for lymphomas of nasal cavity and paranasal sinuses. Distant metastasis remain a problem where local–regional radiation and systemic chemotherapy is recommended for these patients. Early detection and prompt treatment could give a good prognosis.

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References

Key Points
Once diagnosed prompt combined modality treatment with chemotherapy and radiotherapy can give a good prognosis.