Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com/journal/sjmcr/home

OPEN ACCESS

Treatment of Non-Hodgkin Lymphoma Arising De Novo in Unilateral Tonsil

Lina El Mekkoudi*, Salma Janati

Department of Internal Medicine, International Hospital Cheikh Zaid, Abulcasis University, Rabat, Morocco

***Corresponding author:** Lina El Mekkoudi
| **Received:** 18.04.2019 | **Accepted:** 26.04.2019 | **Published:** 30.04.2019
DOI: 10.36347/sjmcr.2019.v07i04.010

Abstract **Case Report**

The tonsil is one of the most frequent sites of involvement of non-Hodgkin lymphoma in the head and neck, Chemotherapy combined with radiation therapy (RT) is considered the standard treatment for limited-stage diffuse large B-cell lymphoma. However, in longterm follow-up studies involving the use of rituximab plus cyclophosphamide, doxorubicin, vincristine, and prednisone (R-CHOP), the role of RT requires clarification. Our purpose is to present a case of unilateral tonsillar lymphoma successfully treated with R-CHOP chemotherapy alone. A 77 year old woman presented with a mass in the right palatine tonsil. No peripheral lymphadenopathy was detected. High fludeoxyglucose uptake was noted in the right palatine tonsil (SUVmax: 13.8) on positron emission tomography. The histological examination of tonsillar biopsy confirmed the diagnosis of non-Hodgkin lymphoma Germinal center B-cell-like (GCB) diffuse Large B-cell Lymphoma (DLBCL). She was staged as IA according to the Ann Arbor staging system with low risk international prognostic index (IPI). Treatment with 6 cycles of R-CHOP chemotherapy led to obtain a metabolic complete remission after 3 cycles. During follow-up, she remains disease-free exceeding one year.

Keywords: tonsillar lymphoma, chemotherapy, metabolic complete remission.

INTRODUCTION

Lymphoma is the second most common malignant tumour of the head and neck. 90% of lymphomas in this region arise in nodes [1, 2] non-Hodgkin lymphoma (NHL) accounts for only 5% of head and neck tumours and is frequently found in the extranodal lymphatic sites of Waldeyer's ring or in extranodal extralymphatic sites such as the sinuses, salivary glands, thyroid and orbits. The tonsil is one of the most frequent sites of involvement of NHL in the head and neck [3, 4]. Lymphomatous involvement of the tonsil may be diagnosed during clinical or radiological staging for NHL elsewhere, or it may be the primary site of tumour.

Chemotherapy combined with radiation therapy (RT) is considered the standard treatment for limited-stage diffuse large B-cell lymphoma (DLBCL) [5]. However, in longterm follow-up studies involving the use of rituximab plus cyclophosphamide, doxorubicin, vincristine, and prednisone (R-CHOP), the role of RT requires clarification [6-8].

Here, we report a rare case of DLBCL of the right tonsil successfully treated with R-CHOP (Rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone) chemotherapy alone, with complete metabolic response and progression-free survival exceeding one year.

CASE REPORT

A 77 year old woman without relevant medical history, presented with odynophagia (dysphagia), swelling and pain in the right palatine tonsil for the past 2 months. Weight loss, night sweats and fever were absent.

Local examination revealed an approximately 4 × 3 cm smooth non tender mass in the right palatine tonsil (figure 1). No peripheral lymphadenopathy was detected. Systematic examination including respiratory, cardiac, abdominal and central nervous system was normal.

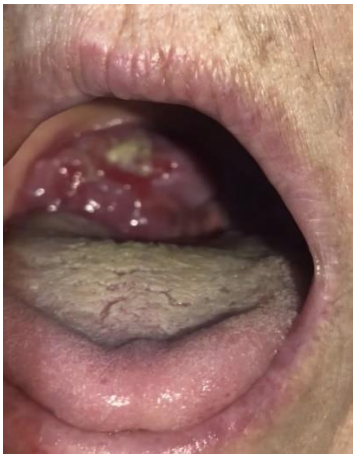

Fig-1: Tonsillar lymphoma on the right

The results of laboratory analyses obtained on admission were as follows: white cell count: 5828/ul ; hemoglobin: 15.02 g/dl ; platelet count: 233000/ul ; lactate dehydrogenase: 202 u/l ; blood urea nitrogen: 0,24 g/l; creatinine: 6,14 mg/l; aspartate aminotransferase: 22 IU/l; alanine aminotrasferase: 20 IU/l.

Computer tomography scan revealed a non enhancing right tonsillar mass measuring 34*22.7 mm, but no signs of neck lymphadenopathy. High fludeoxyglucose uptake was noted in the right palatine tonsil (SUVmax: 13.8) on positron emission tomography. A tonsillar biopsiy was performed, the histological examination confirmed the diagnosis of non-Hodgkin lymphoma Germinal center B-cell-like (GCB) DLBCL. She was staged as IB according to the Ann Arbor staging system with low risk international prognostic index (IPI).

Treatment with R-CHOP chemotherapy led to obtain a clinical complete response (figure 2) and a metabolic complete remission after 3 cycles (figure 3), a total of 6 cycles was administred. During follow-up, she remains disease-free exceeding one year.

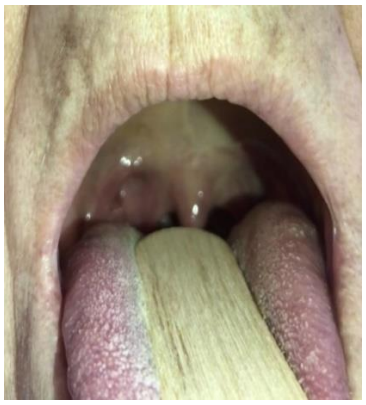

Fig-2: Evolution of the right tonsillar lymphoma after chemotherapy

DISCUSSION

NHL of the oral cavity and oropharynx account for 13% of all primary extranodal NHL with approximately 70% of these occurring in the tonsils. The palatine tonsil is the most frequently involved site followed by palate, gingiva and tongue [9, 2]. Most lymphomas found in the palatine tonsils are the B-cell type, and of these, DLBCL represents most of the cases, reaching as much as 80% in some of the groups studied [9, 10].

Chemotherapy combined with RT is considered the standard treatment for primary DLBCL of the tonsil; Laskar *et al*. [9] demonstrated that disease free survival (DFS) and overall survival (OS) rates are higher in patients treated with chemotherapy combined with RT than in those treated with chemotherapy alone. Mohammadianpanah *et al.* [11] also reported a significantly better DFS rate by using a combined treatment involving chemotherapy and RT.

It has been documented that R-CHOP improves DFS and OS without significant toxic effects [12]. Thus, R-CHOP chemotherapy has been established as the standard treatment for aggressive NHL. However, to the best of our knowledge, there have been no reports on the role of RT in R-CHOP chemotherapy for tonsillar lymphoma.

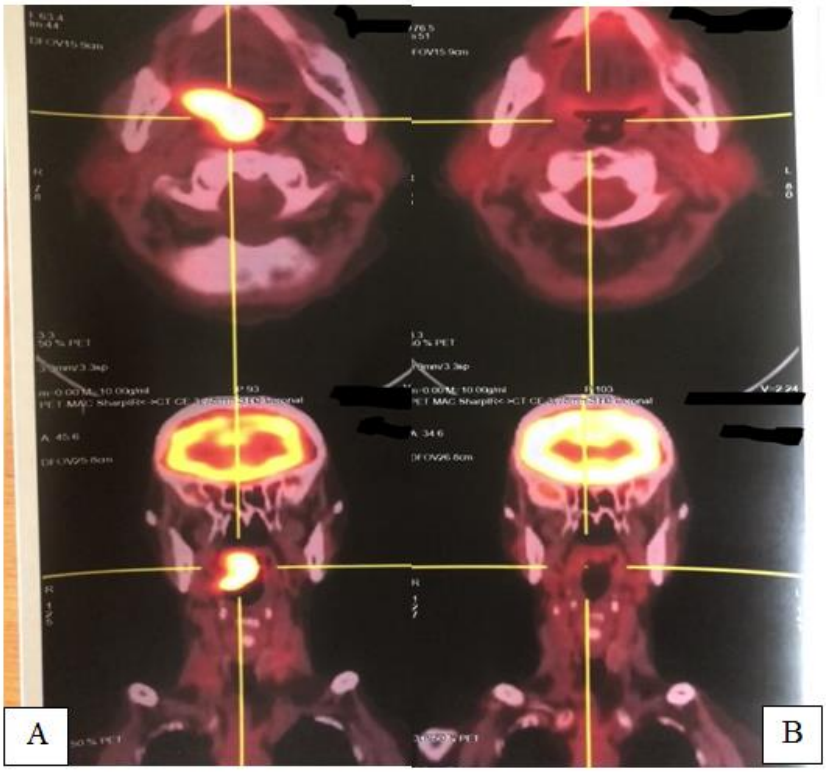

Fig-3: (A) High fludeoxyglucose uptake is noted in the right palatine tonsil (SUVmax: 13.8). (B) She was treated with 3 cycles of R-CHOP chemotherapy and had complete remission

Our case report suggest that chemotherapy alone may be an effective treatment of primary tonsillary lymphoma in the era of rituximab

CONCLUSION

chemotherapy consisting of R-CHOP regimen may lead to a satisfactory outcome in patients with this uncommon neoplasm, which tends to present at an early stage and to have a favourable prognosis.

REFERENCES

1. McGurk M, Goepel JR, Hancock BW. Extranodal lymphoma of the head and neck: a review of 49 consecutive cases. Clinical radiology. 1985 Jan 1;36(5):455-8.
2. Jacobs C, Weiss L, Hoppe RT. The management of extranodal head and neck lymphomas. Archives of Otolaryngology–Head & Neck Surgery. 1986 Jun 1;112(6):654-8.
3. Saul SH, Kapadia SB. Primary lymphoma of waldeyer's ring clinicopathologic study of 68 cases. Cancer. 1985 Jul 1;56(1):157-66.
4. Endo S, Kida A, Sawada U, Sugitani M, Furusaka T, Yamada Y, Iida H, Sakai F, Shigihara S, Niwa H, Yamazaki T. Clinical analysis of malignant lymphomas of tonsils. Acta oto-laryngologica. Supplementum. 1996;523:263-6.
5. Miller TP, Dahlberg S, Cassady JR, Adelstein DJ, Spier CM, Grogan TM, LeBlanc M, Carlin S, Chase E, Fisher RI. Chemotherapy alone compared with chemotherapy plus radiotherapy for localized intermediate-and high-grade non-Hodgkin's lymphoma. New England Journal of Medicine. 1998 Jul 2;339(1):21-6.
6. Bonnet C, Fillet G, Mounier N, Ganem G, Molina TJ, Thiéblemont C, Fermé C, Quesnel B, Brassiene C, Gisselbrecht C, Tilly H. CHOP alone compared with CHOP plus radiotherapy for localized aggressive lymphoma in elderly patients: a study by the Groupe d'Etude des Lymphomes de I'Adulte. Journal of clinical oncology. 2007 Mar 1;25(7):787-92.
7. Persky DO, Unger JM, Spier CM, Stea B, LeBlanc M, McCarty MJ, Rimsza LM, Fisher RI, Miller TP. Phase II study of rituximab plus three cycles of CHOP and involved-field radiotherapy for patients with limited-stage aggressive B-cell lymphoma: Southwest Oncology Group study 0014. Journal of clinical oncology. 2008 May 10;26(14):2258-63.
8. Phan J, Mazloom A, Medeiros LJ, Zreik TG, Wogan C, Shihadeh F, Rodriguez MA, Fayad L, Fowler N, Reed V, Horace P. Benefit of consolidative radiation therapy in patients with diffuse large B-cell lymphoma treated with R-CHOP chemotherapy. J Clin Oncol. 2010 Sep 20;28(27):4170-6.
9. Laskar S, Bahl G, Muckaden MA, Nair R, Gupta S, Bakshi A, Gujral S, Shet T, Shrivastava SK, Dinshaw KA. Primary diffuse large B-cell lymphoma of the tonsil: Is a higher radiotherapy dose required?. Cancer: Interdisciplinary International Journal of the American Cancer Society. 2007 Aug 15;110(4):816-23.

10. Yamanaka N, Harabuchi Y, Sambe S, Shido F, Matsuda F, Kataura A, Ishii Y, Kikuchi K. Non-Hodgkin's lymphoma of Waldeyer's ring and nasal cavity. Clinical and immunologic aspects. Cancer. 1985 Aug 15;56(4):768-76.
11. Mohammadianpanah M, Daneshbod Y, Ramzi M, Hamidizadeh N, Dehghani SJ, Bidouei F, Khademi B, Ahmadloo N, Ansari M, Omidvari S, Mosalaei A. Primary tonsillar lymphomas according to the new World Health Organization classification: to report 87 cases and literature review and analysis. Annals of hematology. 2010 Oct 1;89(10):993-1001.
12. Coiffier B, Lepage E, Brière J, Herbrecht R, Tilly H, Bouabdallah R, Morel P, Van Den Neste E, Salles G, Gaulard P, Reyes F. CHOP chemotherapy plus rituximab compared with CHOP alone in elderly patients with diffuse large-B-cell lymphoma. New England Journal of Medicine. 2002 Jan 24;346(4):235-42.