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Case Report

# Primary Mediastinal Large B-Cell Lymphoma: Case Report

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**ABSTRACT**

Primary mediastinal large B-cell lymphoma is a rare tumour. Patients present with dyspnea, cough, dysphagia and superior vena cava syndrome. Thus, most patients are diagnosed early in stages 1-2. We reported a 19-year-old male patient diagnosed with primary mediastinal large B-cell lymphoma.

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## Introduction

Primary mediastinal large B-cell lymphoma (PMLBCL) is a rare tumour globally.[1] Non-Hodgkin lymphomas (NHL) 2-3% diffuse large B-cell lymphomas (DLBCL) 6-10% constitutes.[2] It is more common in young white women (3:1) and occurs in the mediastinal region. Rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone (R-CHOP) therapy are widely used. Herein, we presented a 19-year-old male patient diagnosed with primary mediastinal large B-cell lymphoma.

## Case Report

19-year-old male patient with no known disease, night sweats that started for about one month, weight loss (25 kilograms in 1 month), cough, and a palpable mass in the neck on thoracic tomography performed with packed lymph filling the anterior mediastinum and reaching both cervical subzones. When nodules (bulky mass) were detected (*Image 1*), the thoracic surgeon performed a tru-cut biopsy, and the patient was referred to us when PMLBCL was received as a result of the material sent to us pathology.

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PET-CT was taken for staging and bone marrow biopsy was performed on the patient. The patient, who was accepted as stage 2B, was started on R-CHOP treatment. Inadequate response after four cycles of R-CHOP was considered as refractory disease and the patient was given 2 cycles of R-DHAP (rituximab, dexamethasone, cytarabine, cisplatin) as salvage therapy. During these treatments, a tracheal stent was inserted by the thoracic surgeon due to tracheal compression (*Image 2*). When the cervical lymph nodes progressed 72 hours after the end of the treatment, the patient was consulted to the radiation oncology department and 4 sessions of radiotherapy were given. The patient was started on a targeted PD-1 blocker, nivolumumab, together with brentuximab, an anti-CD30 monoclonal antibody, for at least 4 cycles, once every 3 weeks. Three courses of treatment were given. It was learned that the patient died due to sudden respiratory arrest while he was at home in the seventh month of his illness.

## Discussion

In PMLBCL, 5-years survival rate is 85%, and there is a difference between whites and blacks. The prognosis is worse with advancing age and the survival rate is less. Among other prognostic factors include socioeconomic status, advanced stage.[3] Risk factors for the white race, female gender, genetic predisposition, environmental factors, diet, occupational exposures, and socioeconomic status can be said to factors such as autoimmune diseases.[4]

Clinically patients with dyspnea, cough, dysphagia and superior vena cava syndrome (VCSS) is close to the findings of the symptoms (facial edema, konjonktival and arm edema). This may result in early diagnosis, and thus the diagnosis in most of the patients (around 80%) is determined as Grade 1 or 2.[5] The disease is a rare, aggressive lymphoma with good prognostic features, which is usually seen at a young age and present with the presence of mass disease.

First-line therapy in PMLBCL is still controversial.[6] Also radiotherapy consolidation treatment is controversial. R-CHOP treatment is the most commonly used chemotherapy protocol and it has been reported that radiotherapy has a positive effect on the prognosis in selected cases. In resistant patients, autologous stem cell transplantation can be progressed after R-DHAP or R-ICE (rituximab, ifosfamide, carboplatin, etoposide). PD-1 blockers emerge as an important treatment alternative. The cause of early death in our patient was not clearly understood. Although the five-years survival rate is 85%, early death occurs due to complications caused by aggressive lymphoma.

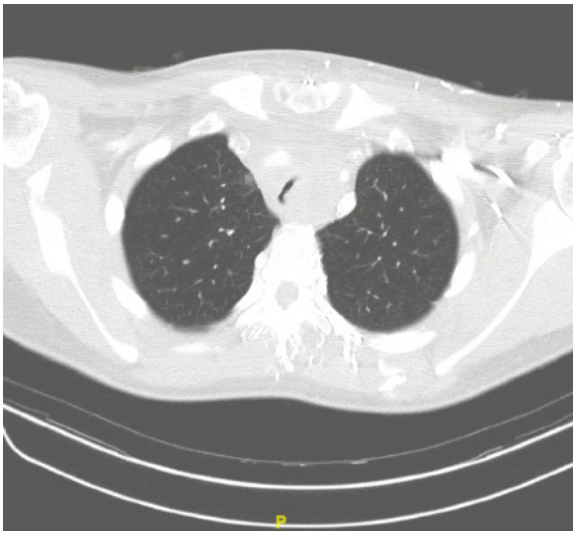

**Image 1.** Mediastinal mass and compression of the trachea. .

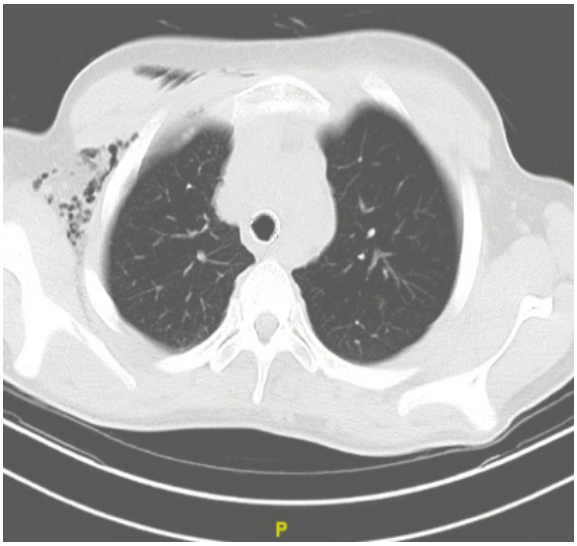

**Image 2.** Tracheal stent view

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***Conflict of interest***

The authors declared that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

***Authors' Contribution***

Study Conception: OC, FO; Study Design: OC, VO; Supervision: OC, VO; Funding: OC, TE; Materials: OC, SC; Data Collection and/or Processing: OC, FO; Statistical Analysis and/or Data Interpretation: YG; Literature Review: OC, VO; Manuscript Preparation: OC, FO; Critical Review: OC, FO.

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