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Secondary Brain Lymphoma in a Case of Breast Diffused Large B-Cell Lymphoma: Case Report

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Abstract

Secondary central nervous system lymphoma (SCNSL) is known as a rare disease. The risk factor of developing SCNSL is primary lymphoma type and site of involvement. We present a patient with an altered mental status known case of breast diffused large B-cell lymphoma (DLBCL) who underwent stereotactic biopsy because of a left periventricular mass lesion, which diagnosed as secondary brain lymphoma after pathologic typing. Because of limited data about the secondary central nervous system, lymphoma and it is a risk factor, we reported an aggressive breast DLBCL with brain involvement.

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Introduction

Secondary central nervous system lymphoma (SCNSL) is a lymphoma not derived from central nervous system (CNS) and can be a recurrence in the CNS or a part of a progressive disease.[1] It is typically a non-Hodgkin lymphoma. SCNSL divided into subtype, leptomeningeal and parenchymal, or as a combination of this two type. Leptomeningeal lymphoma accounts for two-thirds of cases of secondary CNS lymphomas, the one-third remaining is parenchymal disease.[2] because of the lack of clinical data about isolated SCNSL, a standard treatment regimen, and overall prognosis have not identified.[3]

Case Presentation

A 61-year-old woman with confusional state and amnesia admitted in our hospital. The patient had muscle weakness, right side paresis and was ill but not toxic. She had a medical history of breast lymphoma type diffused large B-cell lymphoma (DLBCL) 18 months ago, which treated with chemotherapy and radiotherapy. The patient family history was unremarkable. HIV test was negative. A metastasis workup revealed no other site of involvement. She had three recurrences despite treatment which means the aggressive type of disease. On brain magnetic resonance imaging (MRI) she had a mass lesion (43.34.38 mm) on left frontal and periventricular region with peripheral edema, enhanced on T1+GAD sequence and restricted on diffusion weighted imaging (DWI), compatible with high-grade glioma and lymphoma.

The patient underwent a stereotactic biopsy. The result of biopsy was malignant high-grade B-CELL lymphoma after CD marker typing, diagnosed as SCNSL.

The patient received a high dose of methotrexate chemotherapy and planed for whole brain radiotherapy.

Discussion

The incidence of SCNSL depends on the type of primary lymphoma, the involvement of more than one site, stage of the primary disease and grade of the International Prognostic Index.[1,2] patient with involvement of the breast, testis, and bone marrow as the primary disease is at a higher risk of developing SCNSL.[4] The immunodeficient population are at the highest risk. Because of better diagnostic and treatment approach of primary and secondary CNS lymphoma, focusing more study on

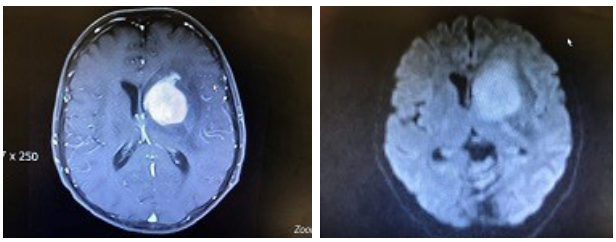

Figure 1. T1+GAD MRI imaging show enhancement and restricted on DWI.

treatment of the elderly patient is needed.[5]

As noted the histologic grade of the primary lymphoma relate to developing of SCNSL. Up on the primary lymphoma classification, indolent, aggressive, or highly aggressive, there is a 3%, 9%, and 27% risk of developing SCNSL. Especially for diffuse large B-cell lymphoma (DLBCL), the incidence has reported 5%, but when the primary lymphoma is the mediastinal large B-cell type, the risk of SCNSL raise to 19%. Indolent lymphomas have a low risk of recurrence, but when CNS involvement has proved, it is usually after the histologic transformation to a more aggressive type.[3,6]

Treatment method and CNS prophylaxis regime after the diagnose of primary lymphoma is a field of excellent research. Large retrospective trial studies found that an intravenous (IV) rituximab added to cyclophosphamide, doxorubicin, vincristine, and prednisolone (CHOP) therapy has decreased the incidence of SCNSL from 6.9% to 4.1%.[7]

The use of IV MTX has increased survival times for isolated SCNSL, especially for parenchymal SCNSL.[7]

Conflict of Interest Disclosures

The authors declare that they have no conflict of interests.

Ethical Statement

Informed consent was obtained form the patient for publication of this report.

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