16 patients, and 3 patients had levels three times the normal limit. Inflammatory markers, including CRP and ESR, were elevated in 17 patients. The most commonly used first-line treatments were high-dose methotrexate with rituximab in 6 patients, methotrexate-rituximab-temozolomide (MTR) in 4 patients, and the MATRix protocol (methotrexate, cytarabine, thiotepa) in 3 patients. Radiotherapy, including whole-brain irradiation, was administered in 8 patients during or after first-line treatment. Ki-67 reached statistical significance when evaluating overall survival and progression-free survival with clinicopathological risk factors. No statistical significance was found for other pathological and clinical laboratory values. Conclusion: CNS lymphoma is a rare type of cancer that develops in central nervous system (CNS). PCNSL comprises ~4% of all primary CNS tumors. There are only about 1,500 new cases of CNS lymphoma diagnosed in each year. It occurs most often in people over 50, with the average age of diagnosis being 65. In our study, the average age of our patients was younger than the literature, and our average age was 56. It's slightly more common in men. People with HIV or AIDS and other immunodeficiencies are more likely to receive a CNS lymphoma diagnosis. Symptoms depend on where your tumor is located. A tumor is a mass of cancer cells. For instance, CNS lymphoma likely won't cause symptoms if the tumor's located in the membrane covering your brain and spinal cord. In contrast, a tumor near one or both eyes often causes vision changes. If the mass occurs near the area of your brain that controls movement, you could have weakness or coordination changes. Symptoms of CNS lymphoma may include: nause and vomiting, hearing loss, weakness in arms, legs or face, weakness affectsng one side of body, headaches, confusion, seizures. The most common reasons for admission of the patients included in our study were headache, unilateral weakness in the body and seizure. The brain parenchyma is the most common location. In our study, similar to the literature, the location of the tumors in all our patients was the brain parenchyma. Our study's findings were consistent with the literature regarding histology. However, we did not demonstrate a correlation between high-risk factors such as elevated LDH, performance scores, and double or triple expression with survival outcomes. Nevertheless, we confirmed the prognostic and predictive importance of Ki-67, in line with the literature. The lack of statistical significance for other prognostic factors may

## https://doi.org/10.1016/j.htct.2024.11.005

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## RICHTER TRANSFORMATION OF CLL DISEASE: A CASE REPORT WITH CENTRAL NERVOUS SYSTEM INVOLVEMENT

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**Objective:** Richter transformation (Richter syndrome) is defined as the transformation of chronic lymphocytic leukaemia (CLL) into an aggressive lymphoma. Richter transformation is estimated to occur with a rate of 5-10% (1). In this article, we aimed to present a case of Richter transformation with central nervous system (CNS) involvement. Case report: In 2018, a 64-year-old woman who presented with lymphocytosis underwent flow cytometry examination and was diagnosed with chronic lymphocytic leukaemia (CLL). 6 cycles of Rituximab + Bendomustine treatment was administered. In 2024, the patient was admitted to the neurosurgery outpatient clinic with complaints of balance disorder, slowing of speech and facial slippage, and lesions were detected in the periventricular area at the level of basal ganglia in the brain (Figure 1). CSF examination did not reveal any findings in favour of lymphoma. A biopsy was taken from the intracranial mass. The biopsy result was reported as highgrade B- cell lymphoma. Transition from CHL to lymphoma was evaluated as Richter transformation. On PET CT examination, a 13\*11 mm hyperdense lesion at the level of the left basal nucleus nucleus lentiformis, showing intense hyper metabolic activity compared to the surrounding parenchyma, showed central nervous system involvement of lymphoma. The patient was interned to the BMT ward and MATRIX protocol containing high-dose Ara-C and high-dose methotrexate with high CNS transmission was applied for a total of 3 cycles. Control brain imaging showed regression of the mass lesion observed in the previous examination. Conclusion: Central nervous system (CNS) infiltration is rare in Richter syndrome (RS). It has only been discussed at the case level (2). Various symptoms including headache, convulsions, diplopia, ataxia, facial paralysis and cognitive dysfunction are observed in these patients (3). In our patient, neurological findings including balance disorder, slowing of speech and facial slipping were observed. Central nervous system involvement was diagnosed by brain biopsy. When the literature is analysed, CNS involvement in these patients is very rare and usually demonstrated by CSF analysis. In a few patients, the diagnosis was made by brain biopsy as in our patient (3). In the literature, no optimal treatment has been reported in patients with Richter transformation with CNS involvement. Negative results have been shown despite treatments including high dose Methotrexate and Rituximab (1,2,3). In our case, successful results were obtained with MATRIX -C protocol including high dose Ara-C and high dose methotrexate. As a result of this treatment, regression was observed in control brain imaging. CONCLUSION: Richter transformation with CNS involvement is a rare but life-threatening condition. Close follow-up in the course of CLL, early diagnosis and initiation of appropriate chemotherapy may be life-saving. References: 1. PRONELLO, Edoardo, et al. Richter's syndrome of the central nervous system. Canadian Journal of Neurological Sciences, 2021, 48.6: 889-892. 2. Xu L, Song J Ch, Xiu H S, and et al. Richter's syndrome of the central nervous system diagnosed concurrently with chronic lymphocytic leukaemia: A case report and literature review. Medicine (Baltimore). 2018 Oct;97(41): e12701. 3. Nakanishi T, Ito T, Fujita Sh, etal. Refractory Chronic Lymphocytic Leukemia with Central Nervous System Involvement: A Case Report with Literature Review. J Blood Med. 2020; 11: 487–502. Figure 1: Intracranial mass appearance on computed tomography of the brain (marked with red colour)

https://doi.org/10.1016/j.htct.2024.11.006