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Case Report

Cure of cerebral lymphoma with only one course of chemotherapy: was dr. House right after all?

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ABSTRACT

We report on an elderly patient with primary diffuse large B-cell lymphoma of the central nervous system. Despite dose reduction of methotrexate (MTX), he developed acute renal failure with creatinine increase to 3.3 mg/dl and stomatitis grade 3. CT scan 16 days after chemotherapy showed complete remission. Because of the very poor tolerance of therapy and the complete response we decided to follow-up carefully but not put him through further treatment after this single administration of MTX. Now, 7 years later, he is still in complete remission and enjoys a great life quality, living with his family. Like a patient in a House episode, he suffered from serious complications of chemo, but this one chemo course saved his life. Renal failure may have caused longer circulation of MTX and extended antineoplastic activity as well as toxicity. This challenges the classic view that therapy dose should be reduced in elderly patients. Outcome may be good despite age or toxicity.

Core tip: We challenge the classic view that therapy dose should be reduced in elderly patients. Outcome may be good despite age or toxicity.

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Introduction

Recently, Gaviani and colleagues reported on the outcome of primary diffuse large B-cell lymphoma of the central nervous system in elderly patients [1]. The key messages were that elderly patients should not be automatically excluded from standard chemotherapy, and that standard treatment may be administered without excess toxicity.

In episode 9 of season 6 of the TV series House, a patient receives standard induction chemotherapy for acute lymphoblastic leukemia [2]. When the leukemia does not respond, the physicians double the dose of chemotherapy. It works but it also severely damages the patient's liver. The oncologist then donates part of his liver and the patient is cured.

Case Report and Discussion

In 2009, an 80-year-old patient was admitted because of confusion, nausea and vertigo. CT scan showed large masses at the lateral inferior part of the 4th ventricle, flocculus of the left part of the cerebellum, the

left inferior cerebellar peduncle and the fornix. All lesions were irregularly shaped and showed homogeneous contrast uptake. Biopsy showed diffuse large B-cell lymphoma, non-germinal center type. There were no other sites of involvement, so he was diagnosed with primary diffuse large B-cell lymphoma of the central nervous system.

We treated him with high-dose methotrexate (MTX) according to the protocol for this type of lymphoma in elderly patients of the German Primary Central Nervous System Lymphoma Study Group (G-PCNSL-SG) [3]. He received the first course of MTX, 60% of the standard dose of 4000mg/m², reduced because of a creatinine clearance of 81 ml/min, and dexamethasone. Despite this dose reduction of MTX, he developed acute renal failure with creatinine increase to 3.3 mg/dl and stomatitis with oral pain Common Terminology Criteria for Adverse Events (CTCAE) grade 3. CT scan 16 days after chemotherapy showed complete remission. Because of the very poor tolerance of therapy and the complete response we decided to follow-up carefully but not put him through further treatment. Now, 7 years later, he is still in complete remission and enjoys a great life quality, living with his family. Like the

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patient in the House episode, he suffered from serious complications of chemo, but this one chemo course saved his life. Renal failure may have caused longer circulation of MTX and extended antineoplastic activity as well as toxicity.

Both dr. Gaviani's paper and this case challenge the classic view that therapy dose should be reduced in elderly patients. Outcome may be good despite age or toxicity.

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None

Informed consent statement

Not applicable

Conflicts of interest

There is no conflict of interest

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