7. Grimm SA, DeAngelis LM. Intratumoral hemorrhage after thrombolysis in a patient with glioblastoma multiforme. Neurology. 2007;69:936.
8. Selim M, Kumar S, Fink J, Schlaug G, Caplan LR, Linfante I. Seizure at stroke onset: should it be an absolute contraindication to thrombolysis? Cerebrovasc Dis. 2002;14:54—7.
9. Aleu A, Mellado P, Lichy C, Köhrmann M, Schellinger PD. Hemorrhagic complications after off-label thrombolysis for ischemic stroke. Stroke. 2007;38:417—22.
10. Reith J, Jorgensen HS, Nakayama H, Raaschou HO, Olsen TS, The Copenhagen Stroke Study. Seizures in acute stroke: predictors and prognostic significance. The Copenhagen Stroke Study. Stroke. 1997;28:1585—9.

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Late-onset meningeal lymphomatosis in mantle cell lymphoma controlled with chemotherapy☆

Linfomatosis meníngea tardía en linfoma del manto controlada con quimioterapia

Dear Editor:

Mantle cell lymphoma (MCL) is a B-cell lymphoma with poor prognosis (mean survival time below 5 years).[1] The incidence of central nervous system involvement varies (4%-26% of cases)[2,3]; symptoms appear a mean of 9-25 months from diagnosis.[4] The main prognostic variables associated with central nervous system involvement are unfavourable prognostic index (MIPI[5]) scores,[2] blastoid morphology, and high lactate dehydrogenase levels.[3] These cases show poor response to treatment, with a median survival time of 2-9 months from relapse of central nervous system symptoms.[4,6] Intensive chemotherapy and autologous stem cell transplant achieve complete resolution in only 50% of the patients.[2] Progression to systemic lymphoma is the main cause of death.[3] We present the case of a patient with a rather unusual progression considering the series reported in the literature.

The patient, a 55-year-old woman, was admitted to our department in October 2012 due to diplopia and a recent diagnosis of brachial neuritis affecting the upper trunk of the brachial plexus, associated with paraesthesia, pain, and left arm weakness. In December 1996, she complained of asthaenia and painful cervical lymphadenopathy and was diagnosed with MCL (low-risk, according to MIPI scores) after a lymph node biopsy revealed diffuse infiltration and nodularity of small, cyclin-D1-positive centrocytes (fewer than 10% of the cells were centroblastic). According to immunohistochemical and flow cytometry results, lymphocytes were CD5+, CD19+, CD20+, CD22+, λ+, FMC7+, CD10−, CD23−, and BLC6−. The bone marrow displayed 70% lymphoid infiltration, with the same markers. A complete blood count and biochemical profile disclosed normal results, with 9000 leucocytes/μL and normal differential test results, except for a slight increase in lactate dehydrogenase levels (299 mU/mL). A CT scan revealed supra- and infradiaphragmatic lymphadenopathies measuring up to 2 cm, with no visceromegaly. Five cycles of alternating chemotherapy[7] (CHOP-Bleo/OPEN: cyclophosphamide, doxorubicin, vincristine, prednisone, bleomycin; vincristine, prednisone, etoposide, mitoxantrone) achieved only a partial response. We therefore switched to ESHAP[7] (etoposide, methylprednisolone, cytarabine, platinum). After 4 cycles, chemotherapy was intensified and the patient received an autologous stem cell transplant, achieving complete resolution. In July 2003, diffuse infiltration of the bone marrow was observed. Five cycles of rituximab-ESHAP and a second autologous stem cell transplant (none of the patient's relatives was histocompatible) led to complete resolution. In June 2008, the patient further experienced a recurrence, with 60% bone marrow infiltration. The episode resolved fully after 7 cycles of rituximab-bortezomib-dexamethasone. No non-relative donors for stem cell transplant were found. The patient experienced no further recurrences until her latest admission due to diplopia. The clinical examination revealed complete right third nerve palsy and muscle weakness in the proximal segment of the left arm. A body CT scan showed no abnormalities. A histopathological examination of the bone marrow yielded normal results and flow cytometry revealed 0.37% lymphocytes with the same clonality as in the initial flow cytometry. A brain and spinal cord MRI scan showed no abnormalities. A CSF analysis revealed a slight increase in protein levels and a leucocyte count of 44 cells/μL (58% lymphocytes), with a small percentage (1.5%) of clonal λ lymphocytes, with the markers reported previously. Chemotherapy with intravenous methotrexate (3.5 g/m^2) and triple intrathecal therapy (methotrexate, cytarabine, hydrocortisone) at 2-week intervals normalised CSF after 3 cycles and led to slow clinical improvement.

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In March 2013, however, diplopia reappeared due to right sixth nerve palsy, with no changes in imaging or CSF analysis results. We added temozolomide, achieving progressive resolution of the neurological symptoms. We switched to cytarabine (3 g/m^2 intravenously), due to poor methotrexate clearance, and increased intervals between cycles, completing intrathecal treatment with liposomal cytarabine. In June 2015, nearly 3 years after the central nervous system relapse, the patient remained asymptomatic and was receiving no treatment; clinical and laboratory findings showed full resolution of systemic and neurological anomalies. The only remarkable finding was 0.4% clonal lymphocytes in the bone marrow according to flow cytometry. In August 2015, the patient received consolidation chemotherapy and haploidentical stem cell transplantation from one of her children. She is currently in clinical remission.

This case is exceptional due to the patient's long survival time; the fact that she experienced a late, isolated neurological relapse, which is a rather infrequent event[8] with no predictive factors; and the patient's response to treatment, which was initially good but was subsequently followed by an early relapse and controlled with chemotherapy (this may be explained by the fact that the relapse was initially only meningeal[2]). Intrathecal rituximab is useful in these cases if combined with systemic and intrathecal chemotherapy.[9] The literature reports 3 cases of patients with MCL associated with neurological involvement who displayed an exceptionally good response to ibrutinib. However, as these patients were followed up for a short time, reassessment would be necessary to confirm the positive results over time.[10] In any case, these findings represent a huge step forward in the field.

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References

1. Vose JM. Mantle cell lymphoma: 2013 Update on diagnosis, risk-stratification, and clinical management. Am J Hematol. 2013;88:1082—8.
2. Cheah CY, George A, Giné E, Chiappella A, Kluin-Nelemans HC, Jurczak W, et al. Central nervous system involvement in mantle cell lymphoma: clinical features, prognostic factors and outcomes from the European Mantle Cell Lymphoma Network. Ann Oncol. 2013;24:2119—23.
3. Ferrer A, Bosch F, Villamor N, Rozman M, Graus F, Gutiérrez G, et al. Central nervous system involvement in mantle cell lymphoma. Ann Oncol. 2008;19:135—234.
4. Gill S, Herbert KE, Prince HM, Wolf MM, Wirth A, Ryan G, et al. Mantle cell lymphoma with central nervous system involvement: frequency and clinical features. Br J Haematol. 2009;147:83—8.
5. Hoster E, Dreyling M, Klapper W, Gisselbrecht C, van Hoof A, Hanneke C, et al. A new prognostic index (MIPI) for patients with advanced-stage mantle cell lymphoma. Blood. 2008;111:558—65.
6. Conconi A, Franceschetti S, Lobetti-Bodoni C, Stathis A, Margiotta-Casaluci G, Ramponi A, et al. Risk factors of central nervous system relapse in mantle cell lymphoma. Leuk Lymphoma. 2013;54:1908—14.
7. Cabanillas F, Rodríguez MA, Swan F Jr. Recent trends in the management of lymphomas at M.D. Anderson Cancer Center. Semin Oncol. 1990;17:28—34.
8. Ladetto M, Sametti S, Astolfi M, Corradini P, Ricca I, Drandi D, et al. Central nervous system relapse in a patient with mantle cell lymphoma in continuous clinical and molecular remission at six years since autografting. Leuk Lymphoma. 2001;40:679—82.
9. Villela L, García M, Caballero R, Borbolla-Escoboza JR, Bolaños-Meade J. Rapid complete response using intrathecal rituximab in a patient with leptomeningeal lymphomatosis due to mantle cell lymphoma. Anticancer Drugs. 2008;19:917—20.
10. Bernard S, Goldwirt L, Amorim S, Brice P, Brière J, de Kerviler E, et al. Activity with ibrutinib in mantle cell lymphoma patients with central nervous system relapse. Blood. 2015, pii:blood-2015-05-64783.

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Migralepsy and migraine in the puerperal period[☆]

Migralepsia y migraña en el puerperio

Dear Editor:

We present the case of a 34-year old woman with a history of right frontal pulsatile headache between the ages 11 and 20; episodes were preceded by a right faciobrachial tingling sensation and the appearance of a bright zigzag pattern at the centre of the visual field, extending to the periphery for more than 5 minutes. This left a right homonymous scotoma, white or black in colour, which lasted 20 minutes, scoring the maximum of 10 on the Visual Aura Rating Scale (VARS; scores are distributed as follows: 3 points for duration of aura

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