CASO CLÍNICO/CASE REPORT

Paraparesis Caused by Chronic Lymphocytic Leukemia Mass Compressing the Spinal Cord

Paraparésia Secundária a Massa Compressiva de Leucemia Linfocítica Crónica

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DOI: https://doi.org/10.46531/sinapse/CC/220053/2022

Abstract

B-cell chronic lymphocytic leukemia (CLL-B) is the commonest adult-onset leukemia. Although extra-medullary disease has been reported, neurological consequences are seldom a concern. We aim to report an unusual case of a 66 years-old woman who developed subacute paraparesis due to dorsal (D2-D6) spinal cord compression by an extradural CLL mass, 2 years after CLL diagnosis.

Resumo

A leucemia linfocítica crónica tipo B (LLC-B) é a mais comum das leucemias de início na idade adulta. Sendo conhecida a sua disseminação extra-medular, raramente motiva preocupações neurológicas. Relatamos um caso, invulgar, de uma senhora de 66 anos que, 2 anos após o diagnóstico da doença, viria a desenvolveu paraparésia flácida, resultado de mielopatia dorsal (D2-D6) compressiva por massa leucémica extradural.

Informações/Informations:
Caso Clínico, publicado em Sinapse, Volume 23, Número 1, janeiro-março 2023. Versão eletrónica em www.sinapse.pt;
Case Report, published in Sinapse, Volume 23, Number 1, January-March 2023. Electronic version in www.sinapse.pt

Keywords:
Leukemia, Lymphocytic, Chronic, B-Cell/complications; Paraparesis/etiology; Spinal Cord Compression/etiology.

Palavras-chave:
Compressão da Medula Espinhal/etiologia; Leucemia Linfocítica Crónica Tipo B/complicações; Paraparésia/etiologia.

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Recebido / Received: *2022-08-03*
Aceite / Accepted: *2023-04-13*
Ahead of Print: *2023-05-05*
Publicado / Published: *2023-05-19*

Introduction

Chronic B type lymphocytic leukemia (CLL-B), the commonest adult-onset leukemia, characterized by an abnormal proliferation of monoclonal B-type lymphocytes in blood, bone marrow and lymphoid tissues.[1,2] Infiltration of CLL lymphocytes outside of these sites has been found, namely in skin, pleura, kidney and gastrointestinal tract. Neurological concern is rare, incidence ranging 0.8% to 2% year.[3,4] It is often underdiagnosed since neurological semiology is nonspecific or absent.[5] CNS involvement is usually the consequence of meningeal and cranial nerve invasion by CLL cells. Reports on myelopathy describing spinal cord compression by either a leukemic bulk or an epithelial tumor, common in CLL, are sparse.[6,7] We report the case of a patient with CLL for along 2 years who developed myelopathy due to a paravertebral thoracic mass constituted by B- CLL population compressing spinal cord.

Case Report

A 66-year-old asymptomatic woman presented in October 2007, in routine analysis with a lymphocytosis of 22400 cel/mL. Bone marrow revealed diffuse invasion (80%) by neoplastic cells - mature lymphocytes, establishing the diagnosis of B-cell chronic lymphocytic leukemia (CLL-B). Assuming a non-aggressive disease, patient remained untreated.

Two years last later, the patient was taken to hospital complaining of persistent lumbar pain for 3 months accompanied by progressive paraparesis in the previous week. There was also sensitive disturbance and autonomic dysfunction (urinary hesitation, constipation and tenesmus). Neurological examination disclosed flaccid paraparesis: hip flexion 1/5, leg extension 2/5 and feet dorsiflexion 3/5 - Medical Research Council Scale with lower limb areflexia. Plantar cutaneous reflex was flexor and proprioception was preserved. Thermoalgic and vibration sensations were diminished by T5-T6 level. A spinal magnetic resonance imaging (MRI) was performed, showing an extradural lesion between D2-D5/6, contiguous with paravertebral soft tissue, that invaded vertebrae bodies and compressed the spinal cord (**Fig. 1**). Patient underwent resection. Pathological study confirmed lymphoid cells, CD20 and CD23 positive, compatible with B-CLL (**Fig. 2**). Additional studies including blood work, brain MRI, thoracic, abdominal and pelvis computed tomography (CT) scans and CSF analysis, were unravelling. Of note, CSF studies for malignant cells and cytometry analysis were also negative. Post-operative R-CVP chemotherapy (rituximab, cyclophosphamide, vincristine and prednisolone) and radiotherapy (total dose of 20Gy) was undertaken. In spite of the dorsal mass disappearance (MRI 6 months later), patient remained unable to walk.

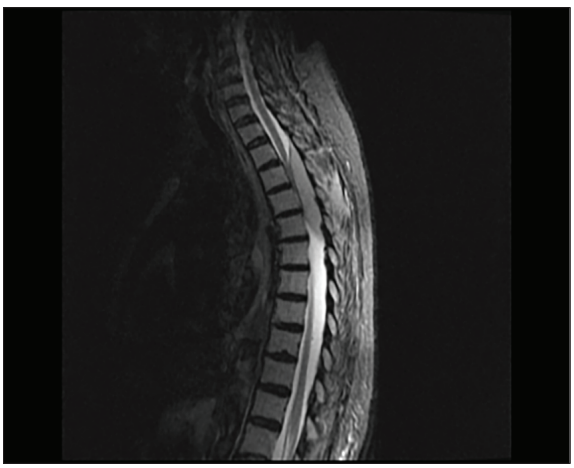

Figure 1. Dorsal MRI. Sagittal T2 STIR - Invasive mass at D2-D6.

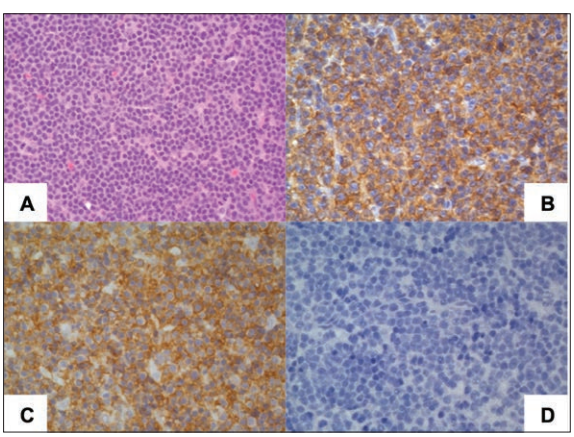

Figure 2. Histology. Magnification x40. Neoplasia composed by diffuse infiltration of lymphoid cells (A), immunoreactive for CD20 (B) and CD23 (C), and negative for CD3 (D). A, H&E; B – D, immunohistochemistry study (CD20, CD23, CD3).

Discussion

As stated, before there are only a counted number of reported cases of paraparesis or paraplegia due to CLL tumoral masses. We just could find two with leukemic bulk compressing the spinal cord as we have seen.[8,9] In both, symptoms of motor deficit appeared more than one year after CLL diagnosis, like this patient. There is another published case of paraplegia in a patient with CLL, however the compression was not due to leukemia but to an epithelial tumor, which is common in CLL.[7] Our case is extremely rare and one of the few described.

We aim alert the clinicians that CLL mass causing spinal cord compression must be promptly diagnosed and treated in order to achieve the best chance outcome. ■

Contributorship Statement / Declaração de Contribuição
AJM and JPG: Conception and first draft.
MP, MC and RT: Critical review and notes.
AJM: Final review.
JPG: Final approval.

Responsabilidades Éticas
Conflitos de Interesse: Os autores declaram a inexistência de conflitos de interesse na realização do presente trabalho.
Fontes de Financiamento: Não existiram fontes externas de financiamento para a realização deste artigo.
Confidencialidade dos Dados: Os autores declaram ter seguido os protocolos da sua instituição acerca da publicação dos dados de doentes.
Consentimento: Consentimento do doente para publicação obtido.
Proveniência e Revisão por Pares: Não comissionado; revisão externa por pares.

Ethical Disclosures
Conflicts of Interest: The authors have no conflicts of interest to declare.
Financing Support: This work has not received any contribution, grant or scholarship.
Confidentiality of Data: The authors declare that they have followed the protocols of their work center on the publication of data from patients.
Patient Consent: Consent for publication was obtained.
Provenance and Peer Review: Not commissioned; externally peer reviewed.

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