REVISTA NEUROCIÊNCIAS

Intracranial Hypertension as a rare presentation of Sjögren's Syndrome: a case report

Hipertensão intracraniana como rara apresentação de Síndrome de Sjögren: relato de caso

Hipertensión intracraneal como presentación rara del Síndrome de Sjögren: reporte de caso

Raquel Quimas Molina da Costa[1], Letícia Fezer de Souza Mansur[2], Carlos Otávio Brandão[3], Dante Valdetaro Alves Bianchi[2], Bárbara Sampaio de Souza Dias[4], Rodrigo Moreira Pereira[4], Kathleen Torres Tenório Monteiro[4], Gabriel Rivadávia Amaral[4], Pollyana Marcela Silva de Farias[4], Maria Lucia Vellutini Pimentel[5]

1.MD, PhD. Doutora. Santa Casa da Misericórdia do Rio de Janeiro. Rio de Janeiro-RJ. Brazil.
2.MD. Ms. Santa Casa da Misericórdia do Rio de Janeiro. Rio de Janeiro-RJ. Brazil.
3.MD, PhD. Neurolife. Rio de Janeiro-RJ. Brazil.
4.MD. Santa Casa da Misericórdia do Rio de Janeiro. Rio de Janeiro-RJ. Brazil.
5.MD, PhD, Professor. Santa Casa da Misericórdia do Rio de Janeiro and Pontifícia Universidade Católica do Rio de Janeiro. Rio de Janeiro-RJ. Brazil

Resumo

Introdução. Apresentamos uma rara manifestação extraglandular da síndrome de Sjögren mimetizando um caso de hipertensão intracraniana idiopática. **Relato de Caso**. Jovem, do sexo feminino, eutrófica, passa a apresentar cefaleia persistente, seguida de diplopia e paresia do sexto nervo bilateral. A investigação de neuroimagem mostrou sinais clássicos de hipertensão intracraniana. O fato de não ser uma paciente obesa, a presença de hipertensão intracraniana idiopática instigou a avaliação de causas secundárias, que revelaram anticorpos anti-SSA/Ro e anti-La/SSB positivos. A biópsia da glândula salivar confirmou o diagnóstico de síndrome de Sjögren. Semanas depois, xerostomia e disfagia se desenvolveram semanas depopis. **Conclusão**. Este relato de caso é importante para conscientizar sobre uma manifestação neurológica atípica da síndrome de Sjögren.

Unitermos. Hipertensão intracraniana; Pseudotumor cerebral; Síndrome de Sjögren; Manifestações neurológicas

Abstract

Introduction. A rare extraglandular manifestation of Sjögren's syndrome is presented, mimicking idiopathic intracranial hypertension. **Case Report**. A young eutrophic female, complained of persistent headache, followed by diplopia and bilateral sixth nerve paresis. Neuroimaging investigation showed classic signs of intracranial hypertension. As the patient had a normal weight, prompted evaluation of secondary causes, which revealed positive anti-SSA/Ro and anti-La/SSB antibodies. A salivary gland biopsy later confirmed the diagnosis of Sjögren's syndrome. Xerostomia and dysphagia developed weeks later. **Conclusion**. This case report is important to raise awareness about an atypical neurological manifestation of Sjögren's syndrome.

Keywords. Intracranial Hypertension; Pseudotumor Cerebri; Sjogren's Syndrome; Neurologic Manifestations

Resumen
Introducción. Se presenta una rara manifestación extraglandular del síndrome de Sjögren, que simula un caso de hipertensión intracraneal idiopática. **Reporte de Caso**. Mujer joven, eutrófica presentó cefalea persistente, seguida de diplopía y paresia bilateral del sexto par craneal. La investigación de neuroimagen mostró signos clásicos de hipertensión intracraneal. El peso normal motivó la evaluación de causas secundarias, que revelaron anticuerpos anti-SSA/Ro y anti-La/SSB positivos, y una biopsia de glándula salival confirmó posteriormente el diagnóstico de síndrome de Sjögren. Semanas después aparecieron xerostomía y disfagia. **Conclusión**. Este reporte de caso es importante para crear conciencia sobre una manifestación neurológica atípica del síndrome de Sjögren.
Palabras clave. Hipertensión intracranial; Pseudotumor cerebral; Síndrome de Sjögren; Manifestaciones neurológicas

Research developed at Santa Casa da Misericórdia do Rio de Janeiro. Rio de Janeiro–RJ, Brazil.

Conflict of interest: no Received in: 09/19/2023 Accept in: 02/23/2024

Corresponding address: Maria Lúcia V Pimentel. Santa Casa de Misericórdia do Rio de Janeiro. Departamento de Neurologia, 24th Enfermaria. Rua Santa Luzia 206, segundo andar. Rio de Janeiro–RJ, Brazil. CEP 20020-022. #mail: mlvpimentel@gmail.com

INTRODUCTION

Idiopathic intracranial hypertension (IIH) is a condition characterized by elevated intracranial pressure and associated symptoms of headache and visual alterations[1]. As suggested by the term *idiopathic*, the underlying pathology is not fully understood. It affects mostly obese young women and, therefore, obesity is suggested as one of the pathological mechanisms. Weight loss is considered one of the management principles of the disease, along with other measures to reduce intracranial pressure, such as relief lumbar punctures and acetazolamide[2].

Diagnostic criteria for IIH require evidence of elevated intracranial pressure and the exclusion of secondary causes, characterizing a primary condition of unclear etiology[3]. However, a substantial part of individuals with elevated intracranial pressure and characteristic symptoms of IIH have an identifiable secondary condition that causes

the elevated cerebrospinal fluid (CSF) pressure. Cerebral venous abnormalities, medications, endocrine disorders, hypervitaminosis, and many clinical conditions have been associated with IIH-like presentations[3].

Sjögren's syndrome (SS) is an autoimmune disease that affects the exocrine glands. The salivary glands are usually the initial site of manifestation, resulting in the known sicca syndrome[4]. Sicca syndrome is characterized by ocular or oral dryness. Besides these symptoms, diagnostic criteria for SS include evidence of salivary gland with focal lymphocytic sialadenitis, serum anti-SSA (Ro) antibodies, ocular staining score ≥5 (or van Bijsterfeld score ≥4) on at least one eye, Schirmer ≤5mm/5min on at least one eye or Unstimulated whole saliva flow rate ≤0.1ml/min. Each of these findings is attributed with a different score point, with the first two being assigned a score of 3 points and the last ones being assigned a score of 1 point. The diagnosis of SS is confirmed when the sum of points is above five[5].

Extraglandular manifestations of SS indicate the systemic involvement of the disease. They include musculoskeletal, dermatologic, renal, pulmonary, cardiovascular, and neurological symptoms. Among neurologic manifestations, both the central nervous system (CNS) and peripheral nervous system may be involved. The most common neurological manifestation of SS is peripheral neuropathy, and most common CNS involvement are demyelinating lesions[6]. In this case-report, we describe an atypical CNS manifestation of SS.

CASE REPORT

CEP #6.528.424; Plataforma Brasil CAAE #75747523.0.0000.5249.

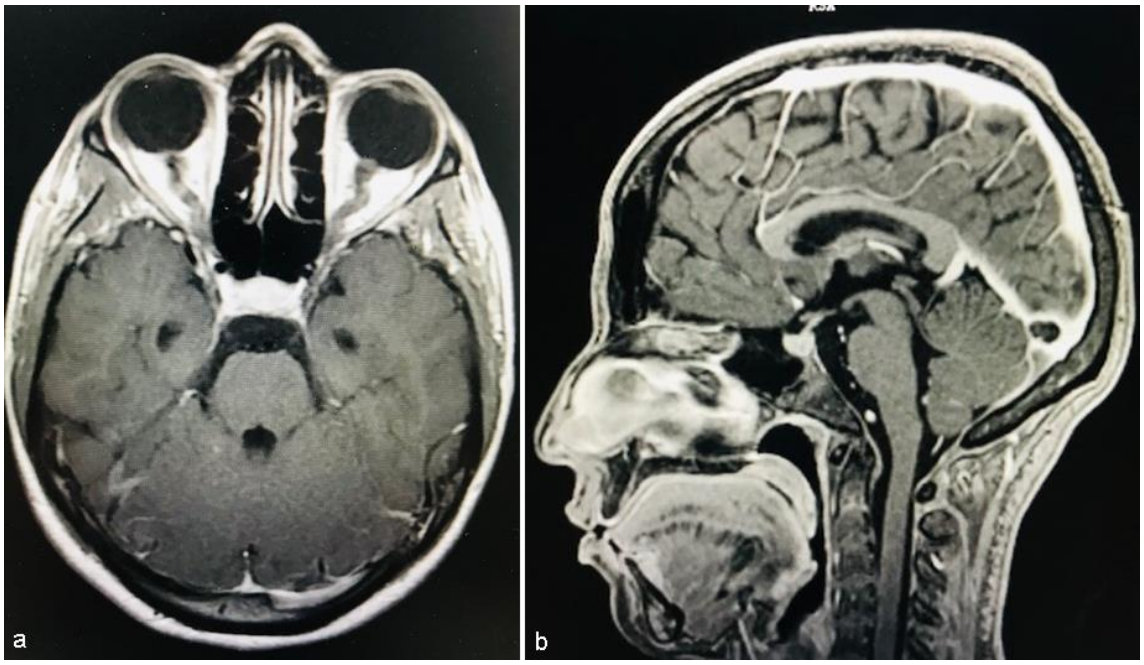
A previously healthy 21-year-old Latin-American female patient came to the Neurology Department due to a history of sudden short-term loss of consciousness, followed by moderate headache, which worsened in supine position, and emesis. Her laboratory test findings were unremarkable, except for a urinalysis consistent with urinary tract infection. Treatment with ciprofloxacin was initiated, without any improvement of her symptoms.

On the sixth day following the initial episode of loss of consciousness, she noticed bilateral diplopia, that eventually evolved to convergent strabismus. At that time, she was hospitalized, and brain magnetic resonance imaging (MRI) suggested intracranial hypertension (Figure 1 and 2). She was discharged after drainage of 25ml of cerebrospinal fluid to relieve intracranial pressure.

Once as an outpatient, her examination revealed good general condition, gait deviation to the right in the Fukuda's Test and bilateral paresis of the sixth cranial nerve. Pupils were isocoric, photo reactive, visual acuity was normal, as the fundoscopy. Lumbar puncture was performed once more and the CSF analysis revealed no WBCs per mm^3, proteins 41mg/dl, glucose 40mg/100ml, negative gram stain and culture, negative anti-AQP4, anti-MOG and oligoclonal bands, detectable intrathecal synthesis of IgA and IgM antibodies (indicating blood-brain barrier

dysfunction), negative IgG, intrathecal production of kappa free light chain [Kappa index 7.23 (R.V.<2.9)], and Neurofilaments =4.852 (R.V.<891). Laboratory tests were unremarkable, except for an erythrocyte sedimentation rate of 34mm/h, low positive antinuclear antibody (1/640), and positive anti-RO/SSA (240), and anti-LA/SSB (174) antibodies.

Figure 1. MRI showing (a) increased perioptic cerebral-spinal fluid and optic nerves tortuosity and flattening of the posterior aspect of the globe, and (b) empty sella sign.



She was treated with acetazolamide and was referred to the Rheumatology Service for Sjögren's Syndrome investigation. Because of emerging complaints of dysphagia and xerostomy during this period, salivary gland biopsy was

obtained, which showed chronic focal sialadenitis with formations of periductal lymphocytic foci, five periductal foci per lobe. This result confirmed the diagnosis of Sjögren's Syndrome. She was finally treated with corticosteroids, azathioprine, hydroxychloroquine and lubricating eye drops, with complete resolution of her headache, diplopia and sicca symptoms.

DISCUSSION

Headache and transient visual obscurations are frequent symptoms of IIH and are useful indicators when occurring daily. Diplopia, on the other hand, is less common and is usually caused by sixth nerve palsy in IIH patients[7]. The long course of this cranial nerve, its relationship with the petrous temporal bone, as well as its ascending course between the pons and clivus, make it susceptible to lesions due to high intracranial pressure[7]. The reported case presented with a headache associated with sixth nerve palsy and diplopia, which raised suspicion for IIH.

Although papilledema is the hallmark of IIH and is usually present in the acute presentation of the condition, there are cases of IIH without papilledema. Diagnostic criteria for IIH without papilledema include unilateral or bilateral abducens nerve palsy, otherwise normal neurological examination, brain MRI without evidence of hydrocephalus or structural lesions, and elevated lumbar puncture opening pressure[3]. Opening pressure was not registered in this patient prior to CSF drainage in the

hospital setting, and subsequent lumbar puncture procedure was not considered adequate to assess opening pressure. Without evidence of elevated CSF pressure, IIH is considered probable when at least three of the following neuroimaging criteria are found: empty sella sign, flattening of the posterior aspect of the globe, distention of the perioptic subarachnoid space with or without a tortuous optic nerve, and/or transverse venous sinus stenosis[3]. With bilateral sixth nerve palsy and three of the above-mentioned neuroimaging criteria (Figure 1), IIH was a probable diagnosis for this case. In addition, there was evidence of symptom relief with CSF drainage, and posteriorly with acetazolamide, which strengthens this hypothesis.

However, when facing a patient with atypical IIH, as patients who are not female, are of older age, or have a BMI below 30kg/m2, additional investigations are mandatory to ensure no other underlying causes[2]. The patient was previously healthy and had a BMI lower than 25kg/m2, which raised suspicion for a secondary cause. Her age directed the investigation for rheumatologic and demyelinating conditions. Positive anti-SSA/Ro and anti-La/SSB antibodies indicate the presence of autoimmunity, and are considered serologic hallmarks of SS[8]. Interestingly, patients with these antibodies have more frequent parotiditis and extra glandular (systemic) manifestations[8]. Following evidence of sicca symptoms, a salivary gland biopsy confirmed the diagnosis.

Neurological manifestations are not common in SS, especially involving the CNS, which represent only about 5% of cases. The peripheral nervous system is more frequently affected, with a prevalence ranging between 3.7 to 16%, usually as purely sensory or sensorimotor polyneuropathies. When the CNS is involved, the most common manifestation are demyelinating lesions, mimicking multiple sclerosis, followed by cranial nerve involvement and cognitive dysfunction[6].

Intracranial hypertension is not considered a common neurological manifestation of SS. As the authors reviewed the literature, only four other cases were found from 1992 to 2022[9–12]. Among those cases, one had comorbid systemic lupus erythematosus, leaving only three other cases solely attributed to SS.

CONCLUSION

The present case highlights the importance of investigating underlying causes of IIH, especially in atypical cases. SS is an uncommon cause of intracranial hypertension, but other cases have been reported in the literature. This and other autoimmune conditions should be ruled out in such atypical cases.

ACKNOWLEDGEMENTS

We thank the collaboration of Cícera Simplicio Machado Leandro from the Neurology Department of Santa Casa da Misericórdia do Rio de Janeiro and from Prof.

Washington Bianchi and the rheumatology residents from the Rheumatology Department of Santa Casa da Misericórdia do Rio de Janeiro for their help with the diagnosis and management of the patient reported in this case.

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