

Intramedullary cavernous: a diagnosis to remember

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Abstract

Diseases of the circulatory system continue to impact the health of populations. Among these, arterial cerebrovascular diseases are an important subgroup. In young adult patients, the years of life potentially lost due to such injuries are considerably higher. In this group, there is a smaller proportion of ischemic events, which can be explained by the occurrence of hemorrhagic events due to vascular malformations and the use of illicit drugs. Cerebrovascular malformations with a higher risk of hemorrhagic events are arteriovenous malformations and cavernous angiomas, also called cavernomas. The latter can occur in any segment of the neuroaxis, and an intramedullary form is considered rare, corresponding to approximately 5.0% of intramedullary lesions. We present the case of an intramedullary cavernoma in a young patient who presented tetraparesis during physical exercise, a diagnosis to be remembered in this age group.

Diseases of the circulatory system continue to impact the morbidity of populations, affecting assistance, social security and social costs [1]. Only in the period from January to October 2021, Brazil registered 82,269 hospital admissions due to circulatory system disorders, and 14,671 were due to cerebrovascular diseases [2].

In this scenario, especially in young adults under 45 years of age, the annual crude rate of incidence of the first stroke is considered low, however, due to the longer life expectancy in this group, the potentially lost years of life are also considerably larger. There is also a particularity in this age group, since the proportion of ischemic events is much lower than that reported in older age groups, this may be related to the occurrence of hemorrhagic stroke due to vascular malformations and the use of illicit drugs [3].

Cerebrovascular malformations can be grouped into four main groups: arteriovenous malformations, venous developmental anomalies, capillary telangiectasias and cavernous angiomas, also called cavernomas. Cavernomas are considered low-flow malformations, since the blood flow through it is very small, so they cannot be seen on angiographic studies [5].

Cavernomas are considered rare, with an estimated prevalence of 0.5% of the population, but they represent the second cerebral malformation, after arteriovenous malformations [6]. They can occur throughout the neuroaxis, and the intramedullary form is also considered an uncommon location,

corresponding to approximately 5.0% of intramedullary lesions [6].

We present the case of a male patient, 34 years old, healthy, with no history of previous pathologies, who was exercising at a gym in the city of Manaus, Amazonas, Brazil, when he presented symptoms of tetraparesis and hypoesthesia, in addition to disabling pain, being taken to the emergency care service in the same city, where an investigation took place for suspected acute cerebrovascular event. Non-contrast computed tomography was performed in the emergency unit where he was treated, which did not show brain alterations. Subsequently, he was submitted to a MRI study of the cervical, thoracic and lumbar spine.

In the cervical segment (Figure 1) an expansive intramedullary formation was evidenced, with hypersignal on the T1-weighted sequence, low signal in T2-weighted and STIR-weighted sequences and tenuous enhancement by the contrast medium, this formation had a tumefactive effect on the medullary parenchyma, occupying its central aspect and extending from the C5-C6 level to the C6-C7 level, with an area also being noted. of hypersignal on T1, affecting the medullary parenchyma from levels C4-C5 to C7-D1, indicative of recent hematic content, it also presented an important local swelling effect, with an increase in the anteroposterior diameter of the medullary parenchyma in those segments. Findings indicative of intramedullary cavernomatous malformation, with an area of recent bleeding, as well as significant myelodema. The patient underwent treatment for surgical cleansing without removing the lesion.

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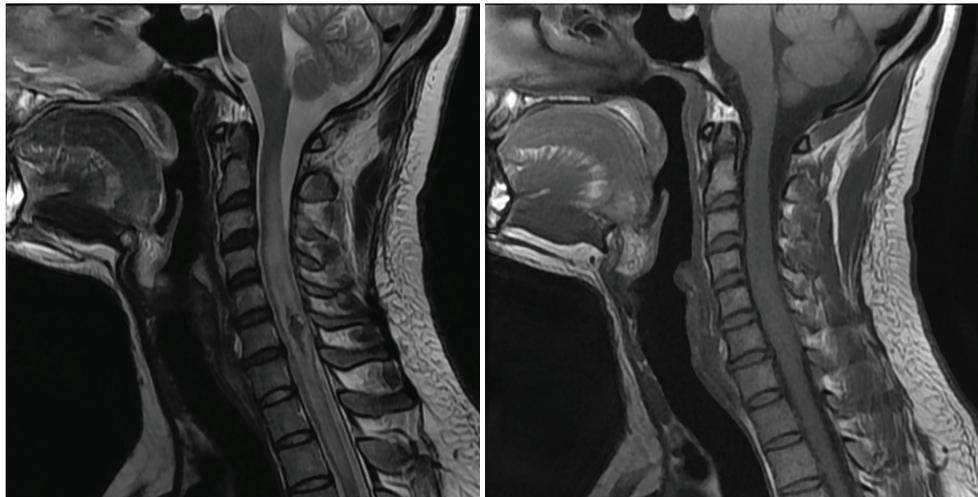


Figure 1. T2 (a) and T1 (b)

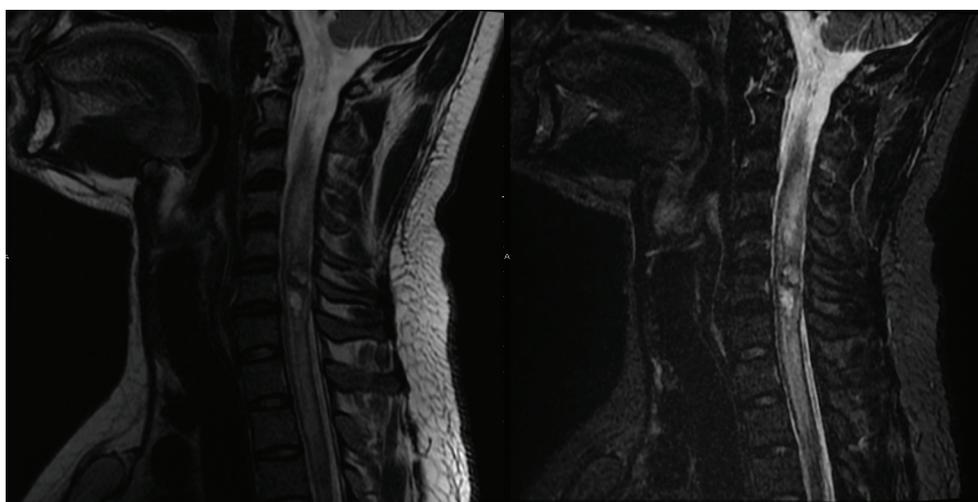


Figure 2. Control after 12 days, showing better delimitation of the intramedullary expansive formation, the bleeding areas became sparser; in addition to a greater swelling effect on the medullary parenchyma.

Expansive intramedullary formation, with hypersignal on the T1(b)-weighted sequence, low signal on the T2(a)-weighted sequences, with a tumefactive effect on the medullary parenchyma at the C5-C6 to C6-C7 level, with an area of hypersignal on T1, indicative of recent hematic content.

After 12 days, the patient was subjected to a new MRI scan, which showed better delimitation of the intramedullary expansive formation, the bleeding areas became sparser, in addition to a greater tumefactive effect on the medullary parenchyma (Figure 2).

In a meta-analysis [7], 352 patients with intramedullary cavernomas were analyzed, it was observed that there was no gender predilection, the mean age at presentation was 42 years and the affected segments in order of frequency were: 57% thoracic, 37% cervical, 4% lumbar and 1% in unreported segment. As for the symptoms presented, 63% of the patients had motor deficit, 65% had sensory symptoms, 27% had pain and 11% had bowel and bladder dysfunction. There was an association with cranial cavernomas in 27% of cases.

In another series of 117 cases, reported between the years 1903 and 1996, of intramedullary cavernomas [8], found similar results, only 2 patients were in the age group above 45 years, predominance of symptoms resulting from myelopathy, 39% of the lesions were located

in the cervical spine, 54% in the thoracic segment and 7% in the lumbar region. 58% of the lesions had radiological signs of lesional hemorrhage.

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