Intramedullary Spinal Capillary Hemangioma: Case Report

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Introduction

Capillary hemangiomas involving the neuraxis are very uncommon. In the spinal cord, they are located mainly intradural and extramedullary. To our knowledge, only four cases in conus medullaris have been previously described. In our case, a 46-year-old man was admitted with back pain, sphincter disturbances, as well as progressive weakness and numbness on the lower extremities. Magnetic resonance imaging revealed an undefined intramedullary lesion on the conus medullaris. The patient underwent microsurgery, which achieved complete removal. Histopathological diagnosis was compatible with capillary hemangioma. His postoperative course was uneventful and all symptoms, including bladder dysfunction clearly regressed. The treatment of intramedullary capillary hemangiomas is very critical in preventing unnecessary morbidity, providing accurate information with respect to prognosis, and establishes a regular outpatient follow-up. The natural history of this lesion involving the spinal cord is not well described, although they are common elsewhere in the body.
A 46-year-old man was admitted with intermittent back pain of 12 months’ duration, which was intractable to medical treatment. The pain got worse and the patient presented with sphincter disturbances as well as progressive weakness and numbness on the lower extremities three months prior to his admission. A neurological examination showed a muscle power grade of Grade 4/5 of the bilateral lower limbs. Magnetic resonance imaging (MRI) of the lumbar spine revealed an undefined intramedullary lesion on the conus medullaris. The lesion was 24 mm (height), 15 mm (anterior-posterior), 19 mm (latero-lateral) in size. The lesion was isointense on T1-weighted images and mildly hypertensive on T2-weighted images, with marked enhancement after contrast material injection (►Fig. 1A, 1B). The patient underwent microsurgery and

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**Fig. 1** MRI of the lumbar spine. The lesion was mildly hyperintense on T2-weighted images, with marked enhancement after contrast material injection.

**Fig. 2** (A) MRI of the thoracic spine performed after 6 months revealed no residual lesion. (B) Histopathological diagnosis was compatible with capillary hemangioma. (C) Tumor section with CD31 immunostaining showing positive staining.
complete remove was achieved. Histopathological diagnosis was compatible with capillary hemangioma (► Fig. 2B, 2C). His postoperative course was uneventful and all symptoms, including bladder dysfunction clearly regressed. MRI of the thoracic spine performed after 6 months revealed no residual lesion (► Fig. 2A).

**Discussion**

Capillary hemangiomas are benign tumors that are most often encountered in the skin and soft tissues. To our knowledge only four cases in conus medullaris have been previously described (►Table 1). Similar to those of common intramedullary tumors, the clinical symptoms of intramedullary capillary hemangiomas are sensory, motor, or sphincter dysfunctions, which eventually appear in the late stages of lesion progression. Furthermore, pain is the most common initial symptom in patients with intramedullary capillary hemangiomas, and the duration of illness is usually longer (> 6 months) than intramedullary gliomas. The main differential diagnosis is cavernous angiomas. Capillary hemangiomas usually present with slowly progressive worsening of symptoms, while cavernous angiomas are often associated with acute neurological deterioration due to bleeding.

The treatments of intramedullary capillary hemangiomas is very critical in preventing unnecessary morbidity, providing accurate information with respect to prognosis, and establishing a regular outpatient follow-up. The natural history of this lesion involving the spinal cord is not well described, although they are common elsewhere in the body.

**Conclusion**

The present case suggests that capillary hemangiomas should be considered in the differential diagnosis of a patient with intramedullary spinal vascular lesions. Complete resection using standard micro-neurosurgical techniques is the goal for treatment of intramedullary capillary hemangiomas.

**Table 1** Cases previously published (in conus medullaris)

<table>
<thead>
<tr>
<th>Author/ year</th>
<th>Age</th>
<th>Sex</th>
<th>Symptoms</th>
<th>Treatment</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mawk et al.⁵</td>
<td>7 months</td>
<td>M</td>
<td>Lower extremity apraxia</td>
<td>Subtotal removal</td>
<td>Recovery at 3 weeks</td>
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<tr>
<td>Roncaroli et al.⁶</td>
<td>53</td>
<td>M</td>
<td>Back and leg pain</td>
<td>Subtotal removal</td>
<td>Little improvement at 1.5 years</td>
</tr>
<tr>
<td>Roncaroli et al.⁶</td>
<td>74</td>
<td>M</td>
<td>Lower extremity weakness</td>
<td>Subtotal removal</td>
<td>No improvement at 1 year</td>
</tr>
<tr>
<td>Andaluz et al.⁴</td>
<td>41</td>
<td>M</td>
<td>Back pain</td>
<td>Total removal</td>
<td>Good recovery at 6 months</td>
</tr>
</tbody>
</table>

**References**