# Conus medullaris cavernous malformation

- Surgical treatment to resect giant intraspinal epidural cavernous hemangioma of Cobb syndrome: illustrative case
- Guidelines for the Diagnosis and Clinical Management of Cavernous Malformations of the Brain and Spinal Cord: Consensus Recommendations Based on a Systematic Literature Review by the Alliance to Cure Cavernous Malformation Clinical Advisory Board Experts Panel
- Intramedullary Cavernoma with Hematomyelia and Unusual Clinical Findings of Brown-Sequard Syndrome: A Case Report
- Thoracic Intradural Extramedullary Cavernous Malformation Mimicking Meningioma
- A case of spinal cord intramedullary cavernoma
- An Alternative Approach to Surgery or Radiosurgery for Treating Cerebral Cavernous Malformations? A Case Report with Literature Review
- Treatment of Spinal Cavernous Malformations: A Single-Center Case Series
- Surgical versus conservative management of spinal cord cavernous malformations: a systematic review and comparative meta-analysis

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A cavernous malformation (also known as a cavernoma) in the conus medullaris is a type of vascular abnormality that occurs in the lower end of the spinal cord.

## Clinical features

Depending on the size and location of the cavernous malformation, symptoms can vary. Common symptoms associated with a conus medullaris cavernous malformation might include:

Back pain

Motor dysfunction or weakness in the legs

Sensory disturbances in the lower limbs

Bladder and bowel dysfunction

Sexual dysfunction

## Diagnosis

Diagnosis typically involves imaging studies such as MRI, which can provide detailed images of the spinal cord and identify vascular malformations. In some cases, CT scans or spinal angiography may also be used.

# Treatment

Treatment options depend on the symptoms, size, and growth of the cavernous malformation. Options might include:

Monitoring: If the cavernoma is small and not causing symptoms, regular monitoring with MRI may be recommended.

Surgery: If the cavernous malformation is symptomatic or causing significant problems, surgical intervention might be considered to remove or reduce the malformation. This is usually considered if conservative management is not effective.

# Prognosis

The prognosis varies depending on the individual case and the effectiveness of the treatment. In some cases, symptoms may improve or stabilize with appropriate treatment.

# Case reports

Cavernous angioma of the cauda equina: A case report [1)].

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Cone cavernoma with a twice secondary intramedullary hemorrhage [2)].

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A 28-year-old woman who presented with bilateral lower limb paraparesis following an intramedullary haemorrhage from conus medullaris CM during the peripartum period. This is the first such case. They also review a handful of other reported cases of peripartum symptomatic spinal intramedullary CMs from the literature highlighting the pathogenesis of such cases and the best timing for intervention [3)].

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Cavernous malformation in the conus medullaris [4)].

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An interesting case of conus medullaris cavernoma that was initially treated as transverse myelitis. Haemorrhagic lumbar puncture led us to perform magnetic resonance (MR) imaging, which showed the presence of a cavernous angioma at the D12-L1 level. The total excision of the lesion was followed by dramatic improvement. We suggest that MR imaging be performed early in all suspected cases of transverse myelitis so that emergency surgical intervention can be offered before the development of permanent neurological deficits [5)].

Cavernous malformations of the conus medullaris are rare lesions; only 9 cases have been reported in the literature. Most cases are described in adults and only one case has been reported in pediatric age group. In this report, the authors describe a 16-year-old male presenting with acute myelopathy due to an intramedullary cavernous malformation of the conus medullaris. The clinical, radiological and surgical features of this patient are presented and discussed and relevant literature of this rare lesion is reviewed [6].

Montano N, Signorelli F, Tufo T, Sioletic S, Lauretti L, Pallini R, Maira G, Doglietto F. Teaching NeuroImages: extralesional bleeding of conus medullaris cavernoma. Neurology. 2010 Jul 6;75(1):e1. doi: 10.1212/WNL.0b013e3181e6209b. PMID: 20603476 [7].

A 29-year-old Arabian man was admitted to the hospital with a progressive sensory loss to light touch, pin prick and vibration of the right and in a lesser extent of the left leg without any association to a particular dermatome. He additionally presented with progressing paresthesias in both legs, unsteady gait and incipient bladder- and bowl incontinence starting approximately 1 week prior to admission. Spinal MRI showed a central, slightly lateralized intramedullary lesion 1 cm in diameter located within the conus medullaris that was suspicious for an intramedullary cavernous malformation. The lesion was accompanied by a perifocal edema and showed an inhomogeneous hypointense core on T2WI consistent with an acute cavernous hemorrhage. Treatment of symptomatic intramedullary cavernous angiomas should, if possible, consist of total surgical excision. It is essential to achieve complete removal during the first operation to avoid any residues that may lead to further bleeding [8].

A 74-year-old man who initially developed low back pain and numbness of the right leg and subsequently paraplegia, ASIA impairment scale 'c'. MRI revealed a cavernous angioma of the conus medullaris with perilesional oedema and signs of acute bleeding. Clinical improvement was associated with changes in the MRI [9].

1)
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Garrido Ruiz PA, Garrido MR (2023) Cone cavernoma with a twice secondary intramedullary hemorrhage. Imaging J Clin Medical Sci 10(1): 001-003. DOI: 10.17352/2455-8702.000139
3)
Abougamil AB, Ashkan K, Rayan T. Peripartum haemorrhage from an intramedullary conus medullaris cavernous malformation: a rare but serious complication. Ann R Coll Surg Engl. 2023 Jan;105(1):82-86. doi: 10.1308/rcsann.2022.0033. Epub 2022 May 31. PMID: 35639098; PMCID: PMC9773293.
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Goyal RK, Nayak B, Maharshi R, Biswal D. Cavernous malformation in the conus medullaris: A rare report. Neurol India. 2016 Jul-Aug;64(4):821-3. doi: 10.4103/0028-3886.185416. PMID: 27381145.
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Balasubramaniam S, Mahore A. Cavernoma of the conus medullaris mimicking transverse myelitis.

Singapore Med J. 2013 Feb;54(2):e24-7. doi: 10.11622/smedj.2013034. PMID: 23462837.
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Khalatbari MR, Hamidi M, Moharamzad Y. Pediatric intramedullary cavernous malformation of the conus medullaris: case report and review of the literature. Childs Nerv Syst. 2011 Mar;27(3):507-11. doi: 10.1007/s00381-010-1350-4. Epub 2010 Dec 1. PMID: 21120507.
7)

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8)

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9)

Hernández D, Moraleda S, Royo A, Martinez M, Garcia J, Vazquez MJ. Cavernous angioma of the conus medullaris as a cause of paraplegia. Spinal Cord. 1999 Jan;37(1):65-7. doi: 10.1038/sj.sc.3100716. PMID: 10025700.