

Ependimoma intramedular cervical

El [ependimoma intramedular](#) cervical puede acompañarse de [hidrocefalia](#) [(Aryan S, Ghosal N, Aziz ZA, Hegde AS, Dadlani R. Infantile holocord cellular ependymoma with communicating hydrocephalus: unusual presentation of a rare case. Brain Tumor Pathol. 2013 Mar 20.)].

Anatomía patológica

Se ha descrito el [ependimoma tanicítico](#) en esta localización [(Krisht KM, Schmidt MH. Tanycytic ependymoma: a challenging histological diagnosis. Case Rep Neurol Med. 2013;2013:170791. doi: 10.1155/2013/170791. Epub 2013 Feb 14. PubMed PMID: 23476839; PubMed Central PMCID: PMC3586445.)].

Subependimoma [(Zenmyo M, Ishido Y, Terahara M, Yamamoto T, Tanimoto A, Komiya S, Ijiri K. Intramedullary subependymoma of the cervical spinal cord: a case report with immunohistochemical study. Int J Neurosci. 2010 Oct;120(10):676-9. doi: 10.3109/00207454.2010.509894. PubMed PMID: 20942580.)].

Diagnóstico

Por RM cervical



<http://www.elsevier.es/sites/default/files/elsevier/images/2/2v136n13/grande/2v136n13-90003368fig1.jpg>

A la altura del cuerpo vertebral de C3, tumoración bien delimitada de 30×10×14mm sin edema vasogénico asociado ni cavidad a la altura del canal endimeario.

Tratamiento

Quirúrgico

[Posición decúbito prono](#), sobre [cabezal de Mayfield](#).

Por lo general tienen un plano identificable que permite la realización segura de la extirpación total.

La fenestración unilateral, multinivel, interlaminar permite un buen acceso a un segmento largo intraespinal, protegiendo las estructuras esenciales para la estabilidad de la columna vertebral [(Xie T, Qian J, Wu X, Lu Y, Hu G, Luo C. Unilateral, multilevel, interlaminar fenestration in the removal of a multisegment cervical intramedullary ependymoma. Spine J. 2013 Mar 27. doi:p11: S1529-9430(13)00248-9. 10.1016/j.spinee.2013.02.048.)].

Pronóstico

Pueden experimentar un empeoramiento neurológico inicial en el postoperatorio inmediato, cuyo riesgo se incrementa en pacientes mayores.

El cincuenta por ciento de los pacientes que experimentan este empeoramiento inicial, muestran una mejoría a largo plazo.

El pronóstico es peor en pacientes en los que no se pudo identificar un plano quirúrgico, independientemente del subtipo de ependimoma [(Garcés-Ambrossi, Giannina L, Matthew J McGirt, Vivek A Mehta, Daniel M Sciubba, Timothy F Witham, Ali Bydon, Jean-Paul Wolinsky, George I Jallo, and Ziya L Gokaslan. 2009. "Factors Associated with Progression-free Survival and Long-term Neurological Outcome After Resection of Intramedullary Spinal Cord Tumors: Analysis of 101 Consecutive Cases." *Journal of Neurosurgery. Spine* 11 (5) (November): 591-599. doi:10.3171/2009.4.SPINE08159.)) [(Hanbali, Fadi, Daryl R Fournay, Eric Marmor, Dima Suki, Laurence D Rhines, Jeffrey S Weinberg, Ian E McCutcheon, Ian Suk, and Ziya L Gokaslan. 2002. "Spinal Cord Ependymoma: Radical Surgical Resection and Outcome." *Neurosurgery* 51 (5) (November): 1162-1172; discussion 1172-1174.))]. [(Sandalcioglu, I E, T Gasser, S Asgari, A Lazorisak, T Engelhorn, T Egelhof, D Stolke, and H Wiedemayer. 2005. "Functional Outcome After Surgical Treatment of Intramedullary Spinal Cord Tumors: Experience with 78 Patients." *Spinal Cord* 43 (1) (January): 34-41. doi:10.1038/sj.sc.3101668.))].

Dolor neuropático [(Nakamura M, Tsuji O, Iwanami A, Tsuji T, Ishii K, Toyama Y, Chiba K, Matsumoto M. Central neuropathic pain after surgical resection in patients with spinal intramedullary tumor. *J Orthop Sci.* 2012 Jul;17(4):352-7. doi: 10.1007/s00776-012-0236-6. Epub 2012 May 10. PubMed PMID: 22573215.))].

Vídeos

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Spetzler

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J.Rocha Maguey - Mexico

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~~REFNOTES~~

Bibliografía no analizada

- 4: Arishima H, Takeuchi H, Tsunetoshi K, Kodera T, Kitai R, Kikuta KI. Intraoperative and pathological findings of intramedullary amputation neuroma associated with spinal ependymoma. *Brain Tumor Pathol.* 2012 Nov 28. [Epub ahead of print] PubMed PMID: 23187747.
- 6: Yokota H, Yokoyama K, Noguchi H, Uchiyama Y. Two-stage operation for high cervical intramedullary ependymoma in young adult. *Br J Neurosurg.* 2012 Aug;26(4):540-1. doi: 10.3109/02688697.2011.631618. Epub 2011 Nov 28. PubMed PMID: 22122713.
- 7: Shiraishi T, Kato M, Yato Y, Ueda S, Aoyama R, Yamane J, Kitamura K. New techniques for exposure of posterior cervical spine through intermuscular planes and their surgical application. *Spine (Phila Pa 1976).* 2012 Mar 1;37(5):E286-96. doi: 10.1097/BRS.0b013e318239cc7e. PubMed PMID: 22020584.
- 8: Tsuji O, Nakamura M, Fujiyoshi K, Ishii K, Watanabe K, Hosogane N, Tsuji T, Momoshima S, Toyama Y, Chiba K, Matsumoto M. Cervical intramedullary ependymoma masquerading as cervical spondylotic myelopathy on MRI analysis. *J Orthop Sci.* 2011 Oct 6. [Epub ahead of print] PubMed PMID: 21975522.
- 9: Kucia EJ, Bambakidis NC, Chang SW, Spetzler RF. Surgical technique and outcomes in the treatment of spinal cord ependymomas, part 1: intramedullary ependymomas. *Neurosurgery.* 2011 Mar;68(1 Suppl Operative):57-63; discussion 63. doi: 10.1227/NEU.0b013e318208f181. PubMed PMID: 21206303.
- 11: Tseng HM, Kuo LT, Lien HC, Liu KL, Liu MT, Huang CY. Prolonged survival of a patient with cervical intramedullary glioblastoma multiforme treated with total resection, radiation therapy, and temozolomide. *Anticancer Drugs.* 2010 Nov;21(10):963-7. doi: 10.1097/CAD.0b013e32833f2a09. PubMed PMID: 20838208.
- 12: Yanni DS, Ulkatan S, Deletis V, Barrenechea IJ, Sen C, Perin NI. Utility of neurophysiological monitoring using dorsal column mapping in intramedullary spinal cord surgery. *J Neurosurg Spine.* 2010 Jun;12(6):623-8. doi: 10.3171/2010.1.SPINE09112. PubMed PMID: 20515347.
- 13: Lim BS, Park SQ, Chang UK, Kim MS. Spinal cord tanycytic ependymoma associated with neurofibromatosis type 2. *J Clin Neurosci.* 2010 Jul;17(7):922-4. doi: 10.1016/j.jocn.2009.09.045. Epub 2010 Apr 18. PubMed PMID: 20403699.
- 14: Sun JJ, Wang ZY, Xie JC, Li ZD, Ma CC, Liu B, Zhao JZ. [Comparative analysis between multi-segments intramedullary spinal cord congenital tumors and benign ependymomas]. *Beijing Da Xue Xue Bao.* 2010 Apr 18;42(2):183-7. Chinese. PubMed PMID: 20396361.
- 15: Kaner T, Sasani M, Oktenoglu T, Solmaz B, Sarloglu AC, Ozer AF. Clinical analysis of 21 cases of spinal cord ependymoma : positive clinical results of gross total resection. *J Korean Neurosurg Soc.* 2010 Feb;47(2):102-6. doi: 10.3340/jkns.2010.47.2.102. Epub 2010 Feb 28. PubMed PMID: 20224707; PubMed Central PMCID: PMC2836443.
- 16: Kurzbuch AR, Rilliet B, Vargas MI, Boex C, Tessitore E. Coincidence of cervical spondylotic myelopathy and intramedullary ependymoma: a potential diagnostic pitfall. *J Neurosurg Spine.* 2010 Mar;12(3):249-52. doi: 10.3171/2009.10.SPINE09138. PubMed PMID: 20192622.
- 17: Qin MJ, Peng B, Luo DD, Chen YD. [Microsurgical treatment of intramedullary tumor in the superior cervical spinal cord]. *Nan Fang Yi Ke Da Xue Xue Bao.* 2010 Feb;30(2):368-70. Chinese. PubMed PMID: 20159725.

- 18: Adam Y, Benezech J, Blanquet A, Fuentes JM, Bousigue JY, Debono B, Duplessis E, Espagno C, Plas JY, Lescure JP, Destandau J, Hladky JP, Grunewald P, Mahla K, Remond J, Louis E. [Intramedullary tumors. Results of a national investigation in private neurosurgery]. *Neurochirurgie*. 2010 Aug;56(4):344-9. doi: 10.1016/j.neuchi.2009.11.003. Epub 2010 Jan 25. French. PubMed PMID: 20097390.
- 19: Cho JC, Miller A, Kettner NW. Cervical ependymoma in a male adolescent with neck and back pain. *J Manipulative Physiol Ther*. 2009 Oct;32(8):695-700. doi: 10.1016/j.jmpt.2009.08.021. PubMed PMID: 19836608.
- 20: Derrey S, Maltête D, Ahtoy P, Fregey P, Proust F. [Severe orthostatic hypotension and intramedullary tumor: a case report and review of the literature]. *Neurochirurgie*. 2009 Dec;55(6):589-94. doi: 10.1016/j.neuchi.2009.05.002. Epub 2009 Jul 9. Review. French. PubMed PMID: 19592056.
- 21: Joaquim AF, Santos MJ, Tedeschi H. Surgical management of intramedullary spinal ependymomas. *Arq Neuropsiquiatr*. 2009 Jun;67(2A):284-9. PubMed PMID: 19547824.
- 22: Fleuret C, Dupré-Goetghebeur D, Person H, Pillette-Delarue M, Conan-Charlet V, Mériot P, Esnault-Lavandier C, Misery L. [Brachioradial pruritus revealing an ependymoma]. *Ann Dermatol Venereol*. 2009 May;136(5):435-7. doi: 10.1016/j.annder.2008.11.020. Epub 2009 Apr 25. French. PubMed PMID: 19442801.
- 23: Mobley B, Kalani MY, Harsh GR 4th, Edwards MS, Vogel H. Papillary tumor of the spinal cord: report of 2 cases. *Am J Surg Pathol*. 2009 Aug;33(8):1191-7. doi: 10.1097/PAS.0b013e31819c45ca. PubMed PMID: 19417584.
- 24: Sun J, Wang Z, Li Z, Liu B. Microsurgical treatment and functional outcomes of multi-segment intramedullary spinal cord tumors. *J Clin Neurosci*. 2009 May;16(5):666-71. doi: 10.1016/j.jocn.2008.08.016. Epub 2009 Mar 19. PubMed PMID: 19303302.
- 25: Shamji MF, Benoit BG, Perry A, Jansen GH. Giant cell ependymoma of the thoracic spine: pathology case report. *Neurosurgery*. 2009 Mar;64(3):E566-7; discussion E567. doi: 10.1227/01.NEU.0000338428.01654.A4. PubMed PMID: 19240583.
- 26: Szpak GM, Lewandowska E, Schmidt-Sidor B, Pasennik E, Modzelewska J, Stepień T, Zdaniuk G, Kulczycki J, Wierzba-Bobrowicz T. Giant cell ependymoma of the spinal cord and fourth ventricle coexisting with syringomyelia. *Folia Neuropathol*. 2008;46(3):220-31. PubMed PMID: 18825598.
- 27: Aghakhani N, David P, Parker F, Lacroix C, Benoudiba F, Tadie M. Intramedullary spinal ependymomas: analysis of a consecutive series of 82 adult cases with particular attention to patients with no preoperative neurological deficit. *Neurosurgery*. 2008 Jun;62(6):1279-85; discussion 1285-6. doi: 10.1227/01.neu.0000333299.26566.15. PubMed PMID: 18824994.
- 28: Barbagallo GM, Caltabiano R, Parisi G, Albanese V, Lanzafame S. Giant cell ependymoma of the cervical spinal cord: case report and review of the literature. *Eur Spine J*. 2009 Jul;18 Suppl 2:186-90. doi: 10.1007/s00586-008-0789-4. Epub 2008 Sep 27. Review. PubMed PMID: 18820954; PubMed Central PMCID: PMC2899556.
- 29: Alkhani A, Blooshi M, Hassounah M. Outcome of surgery for intramedullary spinal ependymoma. *Ann Saudi Med*. 2008 Mar-Apr;28(2):109-13. PubMed PMID: 18398287.

- 30: Taricco MA, Guirado VM, Fontes RB, Plese JP. Surgical treatment of primary intramedullary spinal cord tumors in adult patients. *Arq Neuropsiquiatr*. 2008 Mar;66(1):59-63. PubMed PMID: 18392416.
- 31: Kelleher MO, Tan G, Sarjeant R, Fehlings MG. Predictive value of intraoperative neurophysiological monitoring during cervical spine surgery: a prospective analysis of 1055 consecutive patients. *J Neurosurg Spine*. 2008 Mar;8(3):215-21. doi: 10.3171/SPI/2008/8/3/215. PubMed PMID: 18312072.
- 32: White JB, Miller GM, Layton KF, Krauss WE. Nonenhancing tumors of the spinal cord. *J Neurosurg Spine*. 2007 Oct;7(4):403-7. PubMed PMID: 17933314.
- 33: Nakamura M, Ishii K, Watanabe K, Tsuji T, Takaishi H, Matsumoto M, Toyama Y, Chiba K. Surgical treatment of intramedullary spinal cord tumors: prognosis and complications. *Spinal Cord*. 2008 Apr;46(4):282-6. Epub 2007 Oct 2. PubMed PMID: 17909556.
- 34: Yang YM, Jiang HZ, Sha C, Yuan QG, Wang CC, Xie HW, Zhou K, Wang DM. [Treatment of multisegmental intramedullary cervical spinal cord ependymomas]. *Zhonghua Wai Ke Za Zhi*. 2007 May 15;45(10):705-7. Chinese. PubMed PMID: 17688827.
- 35: McGirt MJ, Chaichana KL, Atiba A, Attenello F, Woodworth GF, Jallo GI. Neurological outcome after resection of intramedullary spinal cord tumors in children. *Childs Nerv Syst*. 2008 Jan;24(1):93-7. Epub 2007 Jul 31. PubMed PMID: 17665203.
- 36: O'Shaughnessy J, Bussi res A. Subtle clinical signs of a spinal cord ependymoma at the cervicothoracic level in an adult: a case report. *J Can Chiropr Assoc*. 2006 Dec;50(4):244-8. PubMed PMID: 17549184; PubMed Central PMCID: PMC1840009.
- 37: Farhadi MR, Rittierodt M, Stan A, Capelle HH, Tham-M cke B, Krauss JK. Intramedullary ependymoma associated with Lhermitte-Duclos disease and Cowden syndrome. *Clin Neurol Neurosurg*. 2007 Oct;109(8):692-7. Epub 2007 Jun 4. PubMed PMID: 17544575.
- 38: Mohammadianpanah M, Vasei M, Mosalaei A, Omidvari S, Ahmadloo N. Malignant spinal cord compression in cancer patients may be mimicked by a primary spinal cord tumour. *Eur J Cancer Care (Engl)*. 2006 Dec;15(5):497-500. Review. PubMed PMID: 17177910.
- 39: Santagata S, Tuli S, Wiese DE 2nd, Day A, De Girolami U. Intramedullary neuroma of the cervicomedullary junction. Case report. *J Neurosurg Spine*. 2006 Oct;5(4):362-6. PubMed PMID: 17048775.
- 40: Raco A, Esposito V, Lenzi J, Piccirilli M, Delfini R, Cantore G. Long-term follow-up of intramedullary spinal cord tumors: a series of 202 cases. *Neurosurgery*. 2005 May;56(5):972-81; discussion 972-81. PubMed PMID: 15854245.
- 41: Sandalcioğlu IE, Gasser T, Asgari S, Lazorisak A, Engelhorn T, Egelhof T, Stolke D, Wiedemayer H. Functional outcome after surgical treatment of intramedullary spinal cord tumors: experience with 78 patients. *Spinal Cord*. 2005 Jan;43(1):34-41. PubMed PMID: 15326473.
- 42: Kyoshima K, Akaishi K, Tokushige K, Muraoka H, Oikawa S, Watanabe A, Koyama J, Kobayashi S, Unoki T, Goto T, Wada N, Uehara T. Surgical experience with resection en bloc of intramedullary astrocytomas and ependymomas in the cervical and cervicothoracic region. *J Clin Neurosci*. 2004 Aug;11(6):623-8. PubMed PMID: 15261235.
- 43: Maesawa S, Takayasu M, Kajita Y, Yoshida M, Yoshida J. Effects of opening peritumoral syrinxes on motor evoked potentials during resection of an intramedullary spinal cord tumor-case report. *Neurol*

Med Chir (Tokyo). 2004 May;44(5):258-62. PubMed PMID: 15200062.

44: Boccardo M, Telera S, Vitali A. Tanycytic ependymoma of the spinal cord. Case report and review of the literature. Neurochirurgie. 2003 Dec;49(6):605-10. Review. PubMed PMID: 14735006.

45: Sarkar C, Mukhopadhyay S, Ralte AM, Sharma MC, Gupta A, Gaikwad S, Mehta VS. Intramedullary subependymoma of the spinal cord: a case report and review of literature. Clin Neurol Neurosurg. 2003 Dec;106(1):63-8. PubMed PMID: 14643922.

46: Schaan M, Boszczyk B, Jaksche H, Kramer G, Günther M, Stöhrer M. Intraoperative urodynamics in spinal cord surgery: a study of feasibility. Eur Spine J. 2004 Feb;13(1):39-43. Epub 2003 Nov 21. PubMed PMID: 14634852; PubMed Central PMCID: PMC3468037.

47: Sun B, Wang C, Wang J, Liu A. MRI features of intramedullary spinal cord ependymomas. J Neuroimaging. 2003 Oct;13(4):346-51. PubMed PMID: 14569827.

48: Kleinman GM, Zagzag D, Miller DC. Epithelioid ependymoma: a new variant of ependymoma: report of three cases. Neurosurgery. 2003 Sep;53(3):743-7; discussion 747-8. PubMed PMID: 12943590.

49: Chhabra R, Bansal S, Radotra BD, Mathuriya SN. Recurrent intramedullary cervical ependymal cyst. Neurol India. 2003 Mar;51(1):111-3. PubMed PMID: 12865539.

50: Kochbati L, Nasr C, Frikha H, Gargouri W, Benna F, Besbes M, Daoud J, Bouaouina N, Ben Abdallah M, Maalej M. [Primary intramedullary ependymomas: retrospective study of 16 cases]. Cancer Radiother. 2003 Feb;7(1):17-21. Review. French. PubMed PMID: 12648713.

51: Reichert K, Sewekow K. [A man with 3 arms. Phantom limb perception in intramedullary ependymoma]. Nervenarzt. 2002 Jun;73(6):548-51. German. PubMed PMID: 12243003.

52: Yeh JS, Sgouros S, Walsh AR, Hockley AD. Spinal sagittal malalignment following surgery for primary intramedullary tumours in children. Pediatr Neurosurg. 2001 Dec;35(6):318-24. PubMed PMID: 11786700.

53: Maira G, Amante P, Denaro L, Mangiola A, Colosimo C. Surgical treatment of cervical intramedullary spinal cord tumors. Neurol Res. 2001 Dec;23(8):835-42. PubMed PMID: 11760875.

54: Kumar R, Nayak SR, Krishnani N, Chhabra DK. Spinal intramedullary ependymal cyst. Report of two cases and review of the literature. Pediatr Neurosurg. 2001 Jul;35(1):29-34. Review. PubMed PMID: 11490188.

55: Kobata H, Kuroiwa T, Isono N, Nagasawa S, Ohta T, Tsutsumi A. Tanycytic ependymoma in association with neurofibromatosis type 2. Clin Neuropathol. 2001 May-Jun;20(3):93-100. PubMed PMID: 11430494.

56: Hoshimaru M. [Diagnosis and microsurgical treatment of intramedullary spinal cord tumors]. No Shinkei Geka. 2001 Mar;29(3):207-14. Review. Japanese. PubMed PMID: 11321789.

57: Miyazawa N, Hida K, Iwasaki Y, Koyanagi I, Abe H. MRI at 1.5 T of intramedullary ependymoma and classification of pattern of contrast enhancement. Neuroradiology. 2000 Nov;42(11):828-32. PubMed PMID: 11151690.

- 58: Akutsu H, Shibata Y, Okazaki M, Hyodo A, Matsumura A. Intramedullary clear cell ependymoma in the cervical spinal cord: case report. *Neurosurgery*. 2000 Dec;47(6):1434-7; discussion 1437-8. Review. PubMed PMID: 11126915.
- 59: Iwasaki Y, Hida K, Sawamura Y, Abe H. Spinal intramedullary ependymomas: surgical results and immunohistochemical analysis of tumour proliferation activity. *Br J Neurosurg*. 2000 Aug;14(4):331-6. PubMed PMID: 11045198.
- 60: Houten JK, Weiner HL. Pediatric intramedullary spinal cord tumors: special considerations. *J Neurooncol*. 2000 May;47(3):225-30. Review. PubMed PMID: 11016739.
- 61: Hoshimaru M, Koyama T, Hashimoto N. [Microsurgery of cervical intramedullary ependymomas extending into the medulla oblongata]. *No Shinkei Geka*. 2000 Jun;28(6):517-22. Japanese. PubMed PMID: 10875108.
- 62: Kane PJ, el-Mahdy W, Singh A, Powell MP, Crockard HA. Spinal intradural tumours: Part II-Intramedullary. *Br J Neurosurg*. 1999 Dec;13(6):558-63. PubMed PMID: 10715723.
- 63: Maliszewski M, Majchrzak H, Gruenpeter P, Nowaczenco M, Ladziński P. [Surgical treatment of intramedullary tumors: preliminary results]. *Neurol Neurochir Pol*. 1999 Jul-Aug;33(4):857-72. Polish. PubMed PMID: 10612101.
- 64: Hoshimaru M, Koyama T, Hashimoto N, Kikuchi H. Results of microsurgical treatment for intramedullary spinal cord ependymomas: analysis of 36 cases. *Neurosurgery*. 1999 Feb;44(2):264-9. PubMed PMID: 9932879.
- 65: Bret P, Bougeard R, Saint-Pierre G, Guyotat J, Ricci AC, Confavreux C. [Intramedullary subependymoma of the cervical spinal cord. Review of the literature a propos of a case]. *Neurochirurgie*. 1997;43(3):158-63. Review. French. PubMed PMID: 9696891.
- 66: Sgouros S, Malluci CL, Jackowski A. Spinal ependymomas-the value of postoperative radiotherapy for residual disease control. *Br J Neurosurg*. 1996 Dec;10(6):559-66. PubMed PMID: 9115651.
- 67: Lang EW, Chesnut RM, Beutler AS, Kennelly NA, Renaudin JW. The utility of motor-evoked potential monitoring during intramedullary surgery. *Anesth Analg*. 1996 Dec;83(6):1337-41. PubMed PMID: 8942612.
- 68: Xu Q, Bao W, Mao R. Microsurgery of intramedullary cervical cord tumor. *Chin Med J (Engl)*. 1996 Oct;109(10):756-61. PubMed PMID: 9275351.
- 69: Xu QW, Bao WM, Mao RL, Yang GY. Aggressive surgery for intramedullary tumor of cervical spinal cord. *Surg Neurol*. 1996 Oct;46(4):322-8. PubMed PMID: 8876712.
- 70: Jallo GI, Zagzag D, Epstein F. Intramedullary subependymoma of the spinal cord. *Neurosurgery*. 1996 Feb;38(2):251-7. Review. PubMed PMID: 8869051.
- 71: Akai T, Takahashi S, Sonobe M, Sugita K. Multiple neuroepithelial tumors of different cell types-case report. *Neurol Med Chir (Tokyo)*. 1995 Dec;35(12):901-4. Review. PubMed PMID: 8584089.
- 72: Fine MJ, Kricheff II, Freed D, Epstein FJ. Spinal cord ependymomas: MR imaging features. *Radiology*. 1995 Dec;197(3):655-8. PubMed PMID: 7480734.
- 73: Crispino M, Gasparotti R, Pavia M, Bonetti M, Pittiani F, Prandini F, Chiesa A. [Magnetic resonance

myelography. Preliminary experience]. Radiol Med. 1995 Jan-Feb;89(1-2):42-8. Italian. PubMed PMID: 7716310.

74: Tatter SB, Borges LF, Louis DN. Central neurocytomas of the cervical spinal cord. Report of two cases. J Neurosurg. 1994 Aug;81(2):288-93. Erratum in: J Neurosurg. 1995 Apr;82(4):706. PubMed PMID: 8027814.

75: Sweasey TA, Brunberg JA, McKeever PE, Sandler HM, Chandler WF. Cystic cervical intramedullary ependymoma with previous intracyst hemorrhage. Magnetic resonance imaging at 1.5 T. J Neuroimaging. 1994 Apr;4(2):111-3. PubMed PMID: 8186527.

76: Cronqvist S, Greitz D, Maeder P. Spread of blood in cerebrospinal fluid following craniotomy simulates spinal metastases. Neuroradiology. 1993;35(8):592-5. PubMed PMID: 8278039.

77: Ibáñez V, Fischer G, Mauguière F. Dorsal horn and dorsal column dysfunction in intramedullary cervical cord tumours. A somatosensory evoked potential study. Brain. 1992 Aug;115 (Pt 4):1209-34. PubMed PMID: 1393512.

78: Nakasu S, Nakasu Y, Saito A, Handa J. Intramedullary subependymoma with neurofibromatosis-report of two cases. Neurol Med Chir (Tokyo). 1992 May;32(5):275-80. PubMed PMID: 1378943.

79: Pereirinha R, Pimentel J, Antunes JL. [Spinal cord tumors. Anatomoclinical study]. Acta Med Port. 1992 Apr;5(4):181-6. Portuguese. PubMed PMID: 1605066.

80: Nemoto Y, Inoue Y, Tashiro T, Mochizuki K, Oda J, Kogame S, Katsuyama J, Hakuba A, Onoyama Y. Intramedullary spinal cord tumors: significance of associated hemorrhage at MR imaging. Radiology. 1992 Mar;182(3):793-6. PubMed PMID: 1535896.

81: Pagni CA, Canavero S, Giordana MT, Mascalchi M, Arnetoli G. Spinal intramedullary subependymomas: case report and review of the literature. Neurosurgery. 1992 Jan;30(1):115-7. Review. PubMed PMID: 1738438.

82: Ferrante L, Mastronardi L, Celli P, Lunardi P, Acqui M, Fortuna A. Intramedullary spinal cord ependymomas-a study of 45 cases with long-term follow-up. Acta Neurochir (Wien). 1992;119(1-4):74-9. PubMed PMID: 1481757.

83: Vandertop WP, van Wanroij JL, Rosenberg WW, Tulleken CA. [Surgical resection as treatment of spinal intramedullary tumors]. Ned Tijdschr Geneesk. 1991 Apr 13;135(15):664-8. Dutch. PubMed PMID: 2038382.

84: Morioka T, Fujii K, Tobimatsu S, Fukui M, Sakaguchi Y. Usefulness of epidurally evoked cortical potential monitoring during cervicomedullary glioma surgery. J Clin Monit. 1991 Jan;7(1):30-4. PubMed PMID: 1999696.

85: McCormick PC, Torres R, Post KD, Stein BM. Intramedullary ependymoma of the spinal cord. J Neurosurg. 1990 Apr;72(4):523-32. PubMed PMID: 2319309.

86: Ahyai A, Woerner U, Markakis E. Surgical treatment of intramedullary tumors (spinal cord and medulla oblongata). Analysis of 16 cases. Neurosurg Rev. 1990;13(1):45-52. PubMed PMID: 2320269.

- 87: Avrahami E, Tadmor R, Cohn DF. Magnetic resonance imaging in patients with progressive myelopathy following spinal surgery. *J Neurol Neurosurg Psychiatry*. 1989 Feb;52(2):176-81. PubMed PMID: 2703836; PubMed Central PMCID: PMC1032502.
- 88: Rawlings CE 3rd, Giangaspero F, Burger PC, Bullard DE. Ependymomas: a clinicopathologic study. *Surg Neurol*. 1988 Apr;29(4):271-81. PubMed PMID: 3353839.
- 89: Fornari M, Pluchino F, Solero CL, Giombini S, Luccarelli G, Oliveri G, Lasio G. Microsurgical treatment of intramedullary spinal cord tumours. *Acta Neurochir Suppl (Wien)*. 1988;43:3-8. PubMed PMID: 3213654.
- 90: Cooper PR, Epstein F. Radical resection of intramedullary spinal cord tumors in adults. Recent experience in 29 patients. *J Neurosurg*. 1985 Oct;63(4):492-9. PubMed PMID: 4032012.
- 91: Bydder GM, Brown J, Niendorf HP, Young IR. Enhancement of cervical intraspinal tumors in MR imaging with intravenous gadolinium-DTPA. *J Comput Assist Tomogr*. 1985 Sep-Oct;9(5):847-51. PubMed PMID: 2993381.
- 92: Hopf HC. Intermittent Horner's syndrome on alternate sides: a hint for locating spinal lesions. *J Neurol*. 1980;224(2):155-7. PubMed PMID: 6160219.
- 93: de Divitiis E, Spaziante R, Stella L. Giant intramedullary ependymoma. A case report. *Neurochirurgia (Stuttgart)*. 1978 Mar;21(2):69-72. PubMed PMID: 643150.
- 94: Takata K, Takeuchi R, Hamawaki J, Yonezawa T, Naruse A, Ikata T. Diagnosis and treatment of intramedullary ependymoma in the cervical region. *Tokushima J Exp Med*. 1977 Dec;24(3-4):113-9. PubMed PMID: 613484.
- 95: Quencer RM, Tenner MS, Rothman LM. Percutaneous spinal cord puncture and myelocystography. Its role in the diagnosis and treatment of intramedullary neoplasms. *Radiology*. 1976 Mar;118(3):637-44. PubMed PMID: 1251015.
- 96: Sato S, Kanbara H, Hotta T, Uchima S, Kobayashi K. [Surgically treated case of intramedullary tumors of the upper neck with an interesting postoperative course]. *Seikei Geka*. 1971 Jan;22(6):51-5. Japanese. PubMed PMID: 5284247.
- 97: Oberbeckmann C. [Diagnosis, therapy and follow-up of intramedullary spinal cord tumors]. *Schweiz Arch Neurol Neurochir Psychiatr*. 1971;109(1):1-49. German. PubMed PMID: 4259022.
- 98: Boucquey JP. [Non-cystic intramedullary cervical tumors]. *Acta Neurol Psychiatr Belg*. 1967 Jul;67(7):527-38. French. PubMed PMID: 4964293.

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