

Capillary Hemangioma of the Cauda Equina with High Mitotic Activity: Case Report and Review of the Literature

freely dissected from the nerve, and gross total resection achieved. The nerve simulated well post resection and the patient woke from the operation with no neurological deficit.

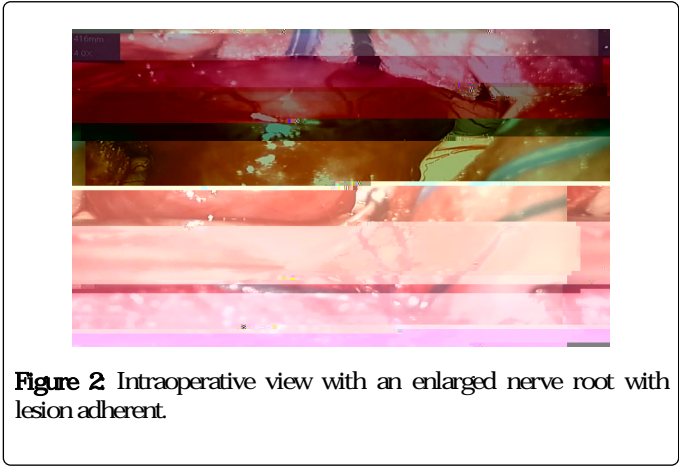


Figure 2 Intraoperative view with an enlarged nerve root with lesion adherent.

Macroscopically, the lesion was pink in color and well circumscribed. Microscopic examination showed lobular proliferation of capillary sized vessels with intervening fibrous septae. The vessels were lined by cytologically bland spindle cells. Mitotic activity was brisk, with mitoses numbering up to 7 per 10 high-power fields. The cells underwent immunostaining and were positive for CD31 and CD34 confirming endothelial origin. Cells were negative for: S100, STAT6, Chromogranin, Synaptophysin, AE1/AE3, EMA, HHV8. The Ki-67 proliferative index was as high as 30% in many areas (Figure 3). Capillary hemangiomas of the common lesions of the skin and soft tissue are often associated with high proliferative activity. To the best of our knowledge, there have only been 17 documented cases of intradural capillary hemangioma of the cauda equina (Table 1).

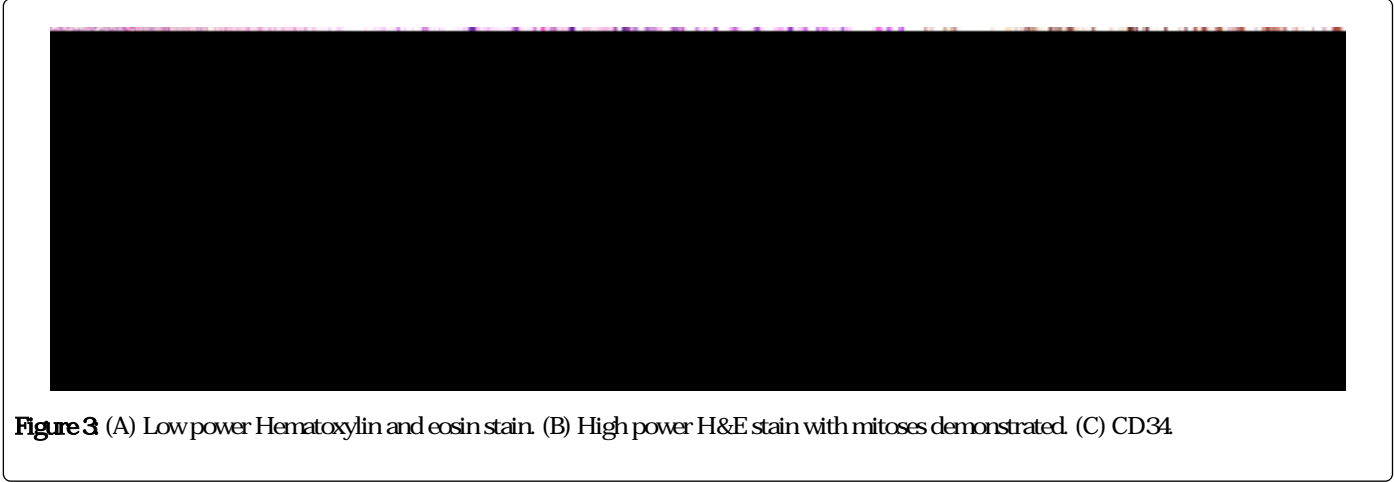


Figure 3 (A) Low power Hematoxylin and eosin stain. (B) High power H&E stain with mitoses demonstrated. (C) CD34.

Author	Number of Cases	Location	Age and Sex
Mastrorardi et al. [2]	1	L5	41M
Roncaroli et al. [3]	1	L4/5	51F
Holtzman et al. [4]	1	L4	56F
Roncaroli et al. [5]	8	Cauda equina	40-62(3F, 5M)
Roncaroli et al. [5]	1	L2/3	71M
Kim et al. [7]	1	L1/2	59M
Ghazi et al. [8]	1	L3/4	42M
Ganapathy et al. [9]	1	L2/3	17M
Miri et al. [10]	1	L3	20M
Liu et al. [1]	1	L3/4	53M
Present case	1	L4/5	27F

Table 1: Summary of case reports involving capillary hemangiomas of the caudal equina [1-10].

Of this cohort there is no obvious gender predilections with patients presenting in their 6-7th decade of life. Furthermore, elevated mitotic activity is rare in capillary hemangiomas of the neuroaxis. This is intradural, extra medullary lesion showed morphological and immunohistochemical features of a capillary hemangioma. The hemangioma was mitotically active, with a Ki-67 proliferative index of up to 30%. There

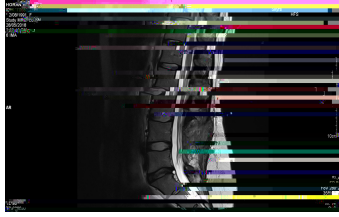


Figure 4 12 month follow-up T2MR without recurrence.

1. Liu JJ, Lee DJ, Jin LW, Kim KD (2015) Intradural extramedullary capillary hemangioma of the cauda equina: Case report and literature review. *Surg Neurol Int* 6 S127-131.
2. Mastroradi L, Guiducci A, Frondizi D, Carletti S, Spera C, et al. (1997) Intraneural capillary hemangioma of the cauda .

Not applicable.

The authors declare no competing interests.

No significant data generated or statistically analysed in this report.

CF and JW were the neurosurgical registrar and neurosurgeon overseeing this case. CF wrote a majority of the paper with JS providing the pathology slides and interpretation. All authors approved the report for publication.

No ethics approval required - This is a case report with deidentified images and histological slides.

A copy of patient consent is available for review by the Editor of the journal. Full patient consent has been obtained.