Cervical Spinal Schwannoma Case Reports

A patient with C5-6 cervical disc prolapse presented with radiculopathy symptoms in the right upper limb, which was refractory to conservative care. He underwent a C5-6 ACDF and reported complete relief from symptoms at 4 weeks. He developed deteriorating symptoms over the next 10 weeks and presented at 14 weeks follow-up with severe myeloradiculopathy symptoms on the left upper limb with upper limb weakness. A fresh MRI identified an intradural extramedullary tumor with cystic changes at the index surgery level. This was treated with tumor excision and histopathology confirmed a diagnosis of schwannoma. The simultaneous presence of cord signal changes with disc herniation obscured the cystic schwannoma which became apparent later on contrast-enhanced MRI imaging.

Conclusion: A careful review of preoperative imaging and contrast MRI study may help in diagnosing cystic schwannomas with concomitant cervical disc herniations that have cord signal changes [1)]

Cases of upper tracheal stenosis due to cervical schwannoma are relatively rare; therefore, no treatment has been determined. In this case, a patient had been treated for asthma for 4 years and was admitted to our hospital because of exacerbation. Computed tomography showed a tracheal stenosis lesion just below the vocal cords, and a biopsy revealed schwannoma. Conservative therapy was preferred rather than tumor resection by surgery. Follow-up for 5 years showed no changes in imaging. Conservative treatment is considered an option if the extratracheal tumor does not grow [2)].

A 53-year-old male presented with 9 months of chronic neck pain and left upper extremity radiculopathy/myelopathy. The MRI revealed an intradural extramedullary C6-C7 left-sided mass with foraminal extension. Following a C5-C7 laminectomy with C5-T2 instrumented fusion, the diagnosis of schwannoma with evidence of recent hemorrhage was confirmed by biopsy. Three weeks

postoperatively, the patient was pain free, no longer taking opioids, and neurologically intact. Although the MRI 6 months later showed no tumor, the MRI 15 months later documented a recurrent enhancing C6-C7 lesion. The patient elected to be treated with external beam radiotherapy and remained asymptomatic.

Conclusion: A 53-year-old underwent resection of a cervical C6-C7 schwannoma with intratumoral hemorrhage. Fifteen months following C5-C7 laminectomy with C5-T2 fusion, the tumor recurred and required external beam radiation therapy [3)]

Pokharel et al. reported a case of extradural cervical schwannoma in a 14-year-old boy with swelling in the posterior triangle of his neck. The radiological features suggested solitary extradural cervical schwannoma which was confirmed later by histopathological findings. There were no postoperative neurological complications [4)]

Perry et al. reported in 2019 the third case of synchronously presenting primary progressive multiple sclerosis (MS) and spinal schwannoma. A 65-year-old man presented with six months of progressive weakness and pain of the right shoulder, forearm, and hand. MRI demonstrated a contrast-enhancing transforaminal lesion at C7, most consistent with a benign nerve sheath tumor. Additional history disclosed several years of worsening fatigue, accompanied by bilateral weakness and lancinating leg pain. MRI of the neuraxis demonstrated abnormalities consistent with chronic demyelinating disease intracranially and within the spinal cord; cerebrospinal fluid (CSF) analysis revealed nine oligoclonal bands and an elevated IgG index, resulting in the diagnosis of MS. Given the symptomatic C7 lesion, the patient subsequently underwent right C6-C7 facetectomy, gross total resection of the tumor, and C6-T1 posterior instrumented fusion. Postoperatively, the patient rapidly recovered normal right upper extremity function, and pathology confirmed benign schwannoma. Synchronously presenting co-morbid neurologic diagnoses are exceedingly rare. Nonetheless, the high incidence and protean nature of MS make it particularly susceptible to such confounding clinical cases. Correspondingly, MS should be considered when neurologic abnormalities are not compatible with a focal radiographic lesion, and the present report emphasizes the value of a good history and exam in unraveling similarly challenging cases [5)].

1)
Hadgaonkar SR, Situt NV, Marya S, Aiyer SN, Sancheti PK. Cervical Schwannoma camouflaged by cervical intervertebral disc prolapse-A case report. Spinal Cord Ser Cases. 2023 Oct 28;9(1):52. doi: 10.1038/s41394-023-00609-y. PMID: 37898665; PMCID: PMC10613260.
2)
Naomi A, Hujiwara H, Koizumi T, Sakurai Y, Kohashi Y, Yoneda Y, Kitamura Y, Hattori Y, Saitou Y. A case of cervical schwannoma with upper tracheal stenosis followed up as asthma for 4 years. Respirol Case Rep. 2022 Jul 7;10(8):e01005. doi: 10.1002/rcr2.1005. PMID: 35832323; PMCID: PMC9263536.
3)
Mahajan UV, Patel M, Hdeib AM. Cervical schwannoma with acute worsening and intratumoral hemorrhage. Surg Neurol Int. 2021 Aug 16;12:409. doi: 10.25259/SNI_623_2021. PMID: 34513174; PMCID: PMC8422501.
4)
Pokharel A, Rao TS, Basnet P, Pandey B, Mayya NJ, Jaiswal S. Extradural cervical spinal schwannoma in a child: a case report and review of the literature. J Med Case Rep. 2019 Jul 17;13(1):230. doi:

10.1186/s13256-019-2108-6. PubMed PMID: 31311599; PubMed Central PMCID: PMC6636037.
5)

Perry A, Peters P, Graffeo CS, Carlstrom LP, Krauss WE. Synchronous Presentation of a Cervical Spinal Schwannoma and Primary Progressive Multiple Sclerosis in a 65-year-old Man. Cureus. 2019 Mar 4;11(3):e4176. doi: 10.7759/cureus.4176. PubMed PMID: 31093475; PubMed Central PMCID: PMC6502288.