Olgu Sunumu

Late Results of a Patient Operated via Anterior Approach for Ventral Spinal Hemangioblastoma: A Case Report

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✔ The authors present the surgical intervention performed for anteriorly located cervical intramedullary tumor in a 34 year old male who had been operated several months previously for posterior fossa hemangioblastoma. Anterior cervical approach comprised C7 median corpectomy and partial corpectomy of the adjacent vertebras. Radical tumor removal was performed without development of a new neurological deficit, and clinical improvement was observed at follow-up visits. Eight years after surgery, recurrent tumor was not detected radiologically, and he is in good clinical condition with minor deficit. In selected cases, especially in benign lesions, anterior cervical approach is recommended because of low morbidity rate and good postoperative outcomes.

Key words: Hemangioblastoma, intramedullary spinal tumor, microsurgery, Von Hippel-Lindau disease

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Spinal Ventral Yerleşimli Hemanjioblastomada Servikal Anterior Yaklaşım

✔ Yazarlar birkaç ay önce posterior fossa hemanjioblastoması nedeniyle opere edilen 34 yaşında erkek olgunun servikal anterior intramedüller yerleşimli tümörü nedeniyle yapılan ikinci operasyonu sunmuşlardır. Anterior servikal yaklaşımda C7 median korpektomi ile komşu vertebralara kısmi korpektomi uygulanmasını içermektedir. Tümöre radikal eksizyon yapılmış ve yeni nörolojik defisit gelişmemiş, takiplerinde klinik düzelme saptanmıştır. Operasyondan sekiz yıl sonra radyolojik olarak nüks tümör saptanmamış olup, ellerde minor motor defisit dışında genel nörolojik muayenesinin iyi olduğu gözlenmiştir. Seçilmiş vakalarda, özellikle benign lezyonlarda servikal anterior yaklaşım düşük morbidite ve postoperatif iyi sonuçları nedeniyle önerilmektedir.

Anahtar kelimeler: Hemanjioblastoma, intramedüller spinal tümör, mikrocerrahi, Von Hippel-Lindau Hastalığı

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Hemangioblastomas are vascular benign tumors accounting for 3 % of all intraspinal neoplasms [1,4,11]. They can occur as a sporadic isolated lesion or as a part of von Hippel-Lindau disease- an autosomal dominant neoplasia syndrome. Spinal hemangioblastomas are commonly of intramedullary type and arise predominantly from the posterior aspect of the spinal cord (98 % of the cases) [12,14].

Although posterior approach for intramedullary hemangioblastomas have been performed since 1913 [2,3,6,7,8,13,15] and reported outcomes using microsurgical technique have been better, operation via this route should be traumatic for the patient with ventrally located small hemangioblastoma. Radical removal of a hemangioblastoma via the anterior approach was first reported by Iwasaki and colleagues in 1999 and limited number of new cases have been described in the literature [5,10].

Authors report a patient operated eight years ago with an uneventful postoperative course and his recent radiological and clinical results.

CASE REPORT

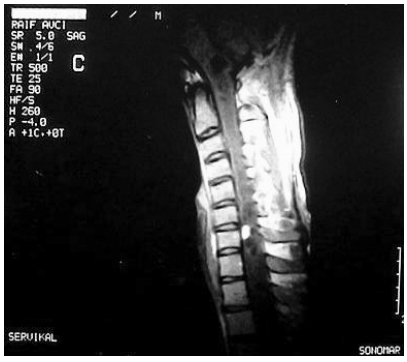
A 32 year old man underwent emergency operation in February 1998 for cerebellar hemangioblastoma, and following succesful radical removal early outcome was favorable.

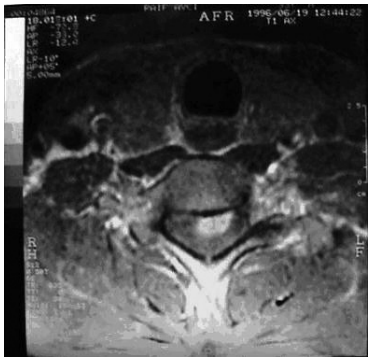
Some months after the operation, the patient experienced increasing weakness and paresthesia in his hands. Cervical MRI showed a ventrally situated tumor at the seventh cervical vertebral level with associated syringomyelia and syringobulbia. Spinal angiography revealed highly vascular tumor and its feeding artery (Figure 1, 2,3). Radiological and clinical evaluations sho-wed that there was no other tumor within the body as a part of von Hippel-Lindau complex. Patient and his family refused a new operation with possible complication and wanted conservative follow up. One year later patient-was admitted to our clinic with progressive neurological deterioration.

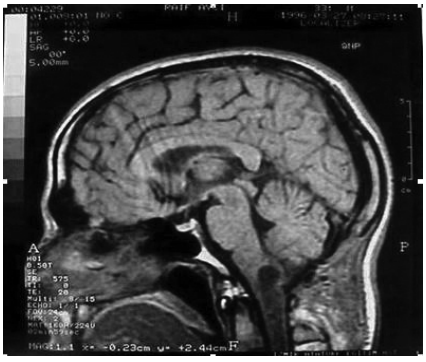
At neurological examination, signs of pyramidal tract were found bilaterally in his four extremities. Atrophic changes were present in his hands and he could not use his hands for daily activities.

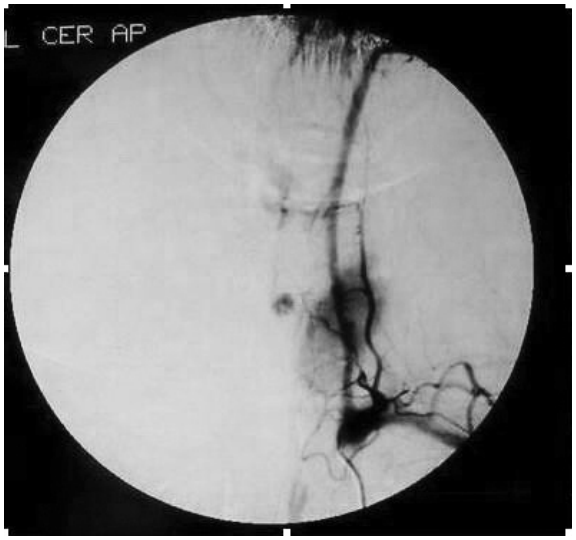
In March 1997 patient underwent second operation in supine position and anterior cervical approach was used. C7 median corpectomy extended to involve some parts of C6 and T1 vertebral bodies was performed. Once duramater was opened red vascular tumor and its feeding artery were seen on the surface of the cord. Feeding artery was coagulated first and then the tumor was dissected from neural tissue by microsurgical technique. Removal of the tumor was surprisingly easy aided by surrounding syrinx formation. After radical removal dura was not sutured, and it was covered only with Gel foam and fibrin glue. Neither placement of a lumbar drain was considered nor a drain was left in the surgical wound site during closure. A bone graft was placed on the corpectomy defect. Anterior cervical spine was stabilized with cervical plate-screw system and tricortical iliac bone graft. Postoperative course was uneventful, and neither neurological deterioration, nor cerebrospinal fluid leakage occurred. Pathological examination result was re-ported as hemangioblastoma.

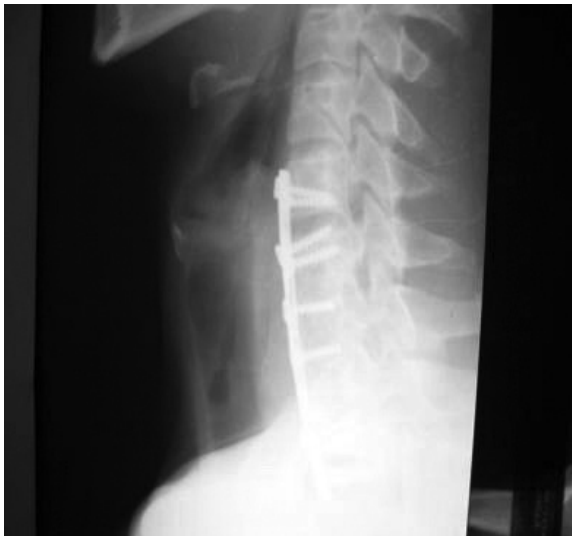
Seven years after the second surgery, X-ray and cervical MRI were obtained, and no new tumor or recurrence was found. Syringomyelia and syringobulbia regressed (Figure 4,5,6). Eight years after the operation patient can work with mild interosseous weakness in his both hands.

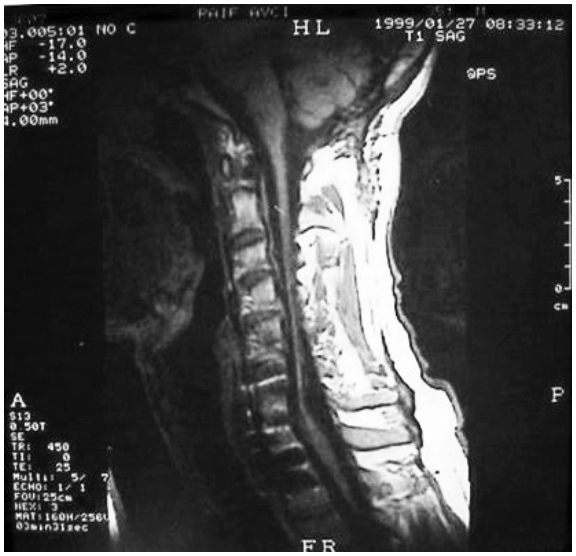


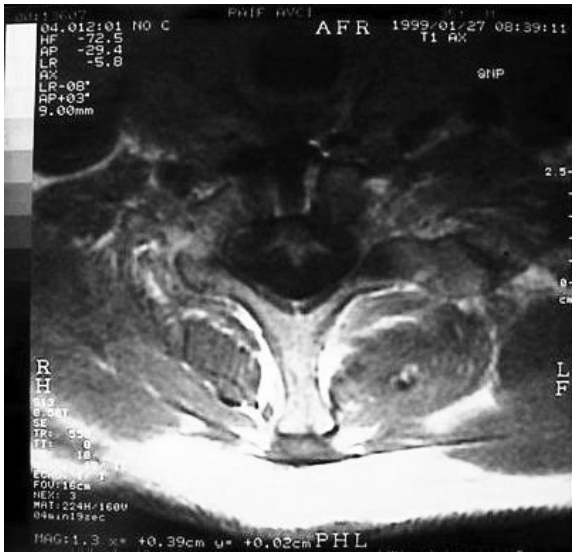












DISCUSSION

The definitive treatment of an intramedullary hemangioblastoma of the spinal cord is total removal of the tumor with microsurgical techniques. If the tumor is located in the posterior or posterolateral aspect of the spinal cord, posterior approach through a laminectomy and a midline myelotomy have been advocated. Majority of the cases have been operated on using this route since 1913. But scarcity of tumors are situated ventrally and removal of the tumor via midline myelotomy could be associated with high morbidity rate. First succesful operation via anterior approach for intramedullary hemangioblastoma was performed in 1998 and it was reported residual or new tumor in cervical spine and the regression of syrin 1999 by Iwasaki and colleagues [5].

Some years later Pluta and colleagues described three new cases [10]. Comparing anterior and pos-

terior surgical approaches for the ventrally located hemangioblastomas, they found that immediate and long term results have been better when an anterior route was selected.

Difficullties of an anterior approach arise from working in a deep and narrow space. In our case corpectomy was expanded sufficiently and dissection carried out without problem.

As reported by many surgeons, syringomyelic cavitation could help dissection of such vascular tumors from surrounding healthy spinal cord tissue. This facilitation was observed in our case also. Not infrequently syringomyelia have regressed or disappeared following total tumor removal and neurological improvement is attributed to the changes of syrinx as much as radical removal of the tumor [8,9,11].

Today there are few but encouraging reports on anterior approach to an intramedullary tumor in the literature. This approach for ventrally located spinal hemangioblastomas allows direct exploration and visualisation of the tumor and its radical removal. For selected cases morbidity rate is low and long term outcome is good. Possible complications include cerebrospinal fluid fistulas and spinal instability.

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