Case Report

International Journal of Neurology and Neurosurgery
Vol.15, No.4 October-December 2023
DOI: http://dx.doi.org/10.21088/ijnns.0975.0223.15423.4

Young Female Developed Cervical Hematoma While Weight Lifting

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How to cite this article:
Aishwarya Walia, Vinit Kumar, Priya Govil. Young Female Developed Cervical Hematoma While Weight Lifting. International Journal of Neurology and Neurosurgery. 2023;15(4): 126-128.

Abstract

A hematoma in the cervical spine typically manifests as localized pain, stiffness and neurological deficits. This case report explores the clinical presentation, diagnostic journey and management of a patient diagnosed with cervical hematoma. The aim is to enhance understanding, highlight challenges in diagnosis and discuss the multidisciplinary approach in managing it.

Keywords: Hematoma; Cervical Spine; Weakness; Stiffness in Neck.

INTRODUCTION

Cervical hematoma predominantly affects any age individuals, causing symptoms such as stiffness in neck, lightheadedness, numbness, weakness, bladder & bowel incontinence fatigue. Our patient, an 18 year-old female, presented with severe pain in neck who later developed quadriplegia. The case provides insight into the diagnostic process and the collaborative efforts required for effective management.

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Received on: 18.08.2023 **Accepted on:** 06.11.2023

CASE

The patient of age 18 years, female reported to emergency with a history of acute onset of severe pain in right side of neck while lifting weight in gym associated with intermittent episodes of light headedness, palpitations and generalized weakness for the past 7 days. Symptoms were exacerbated with neck movements, gradually over days pain started radiating to her right arm associated with tingling sensation. She elaborated her symptoms by mentioning, on day 3 she noticed the grip to her hands were loosen followed by within few hours the weakness & tingling sensation was noticed in all four limbs. On day 4, she was not able to barely walk, had incontinence of bladder. Later had history of hematuria as well. She described a significant decline in her quality of life due to the unpredictable nature of these episodes. No negative past, personal, medical history, drug (eg-anticoagulants). On examination, power in all four limbs was 1/5 (normal 5/5); with brisk grip, plantars: flexor, cranial nerves were normal in limit.

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Patient was feeling lightheaded with heart rate around 100 beats per minute, checked electrolytes which was normal and initially it was similar picture (differential diagnosis) rhabdomyolysis, cord compression syndrome, malignancy, mass/ lesion effect. To rule out above diffential, routine blood investigation along with serum creatinine and urine routine microscopy resulted border line normal. A complete blood count and coagulation profile was normal. In radiology MRI Brain with Cervical Spine (non contrast) showed a focal, well defined elongated intradualextramedullary lesion from C4-C6 level hematoma. An immediate neurosurgical reference was taken, performed a contrast MRI cervical spine shows ovoid posterior epidural hematoma in right aspect of spinal canal from C4-C7 extending into the neural foramina (fig. 1,2).

Further after the case discussion with

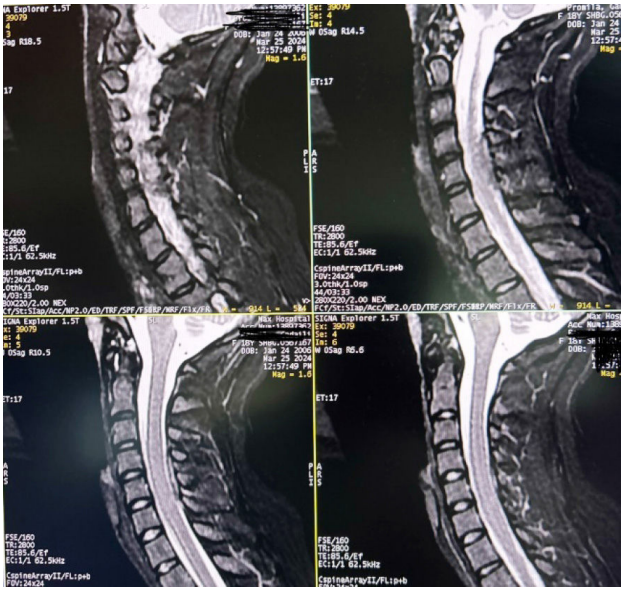


Fig. 1: MRI Cervical with Contrast

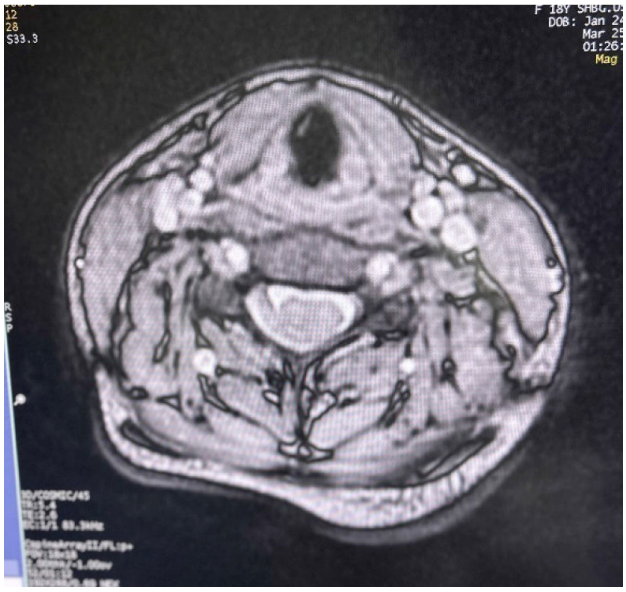


Fig. 2:

neurosurgeon the patient underwent a planned procedure of evacuation of hematoma with C4-C6 laminectomy was done that same evening.

Post-operative: significant relief of symptoms and improvement in neurological function post-operatively and improved bladder function and was discharged on day 12th, advised to follow up.

DISCUSSION

Cervical hematoma has been recognized throughout medical history, it can arise from various etiologies, including traumatic injury, spontaneous bleeding disorders, vascular malformations or iatrogenic causes such as anticoagulant therapy. Historical accounts of cervical hematoma can be found in ancient medical texts and surgical literature with descriptions of traumatic injuries and their associated complications. However, the understanding of cervical hematoma and its management has evolved significantly over time, driven by advances in medical knowledge, imaging technology and surgical techniques. Traumatic cervical hematomas often result from motor vehicle accidents, falls, sports injuries, or direct blows to the neck region, leading to vascular injury and subsequent bleeding. Other risk factors include advanced age, coagulopathies, vascular abnormalities and certain medications such as anticoagulants or antiplatelet agents. While early diagnosis relied primarily on clinical assessment and basic radiographic studies, modern diagnostic modalities such as MRI and CT scans offer unparalleled detail in delineating the extent and location of the hematoma and assessing its impact on adjacent neural structures. Laboratory investigations, including coagulation studies, may also be employed to evaluate for underlying bleeding disorders or coagulopathies. The management of cervical hematoma has evolved from conservative measures to more aggressive surgical interventions, reflecting advances in surgical techniques and perioperative care. While stable hematomas with minimal

neurological deficits may respond to conservative management, rapidly progressing hematomas or those causing significant neurological impairment often require emergent surgical intervention, such as decompressive laminectomy with hematoma evacuation to relieve spinal cord compression and prevent permanent neurological damage.

Prognosis of cervical hematomas varies depending on factors such as the size of the hematoms, duration of compression and adequacy of treatment. Early intervention is associated with better outcomes, including restoration of neurological function and prevention of long term disability. A multidisciplinary approach involving emergency medicine, neurosurgery, radiology and rehabilitation services is essential for optimizing outcomes and promoting long-term recovery in affected individuals.

FOLLOW UP

The patient was closely monitored post-operatively for any signs of complications such as infection or worsening neurological deficits. Physical therapy was initiated to facilitate recovery and improve range of motion. Serial imaging studies were performed to assess the resolution of the hematoma and the stability of the cervical spine. At the 2 follow-up, the patient demonstrated substantial improvement in neurological function with resolution of pain and restoration of sensation and strength in the upper extremities.

CONCLUSION

Hematoma in the cervical spine is a rare but potentially devastating complication that requires prompt recognition and surgical intervention are essential to prevent permanent neurological damage and facilitate recovery. Close monitoring and comprehensive rehabilitation are necessary for optimal outcomes in these patients. Advances in imaging technology, surgical techniques and rehabilitation protocols continue to shape the management of cervical hematoms.

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