Spontaneous cervical epidural hematoma

Epidemiology

This spontaneous spinal epidural hematoma in the cervical region is an uncommon cause of acute spinal cord compression.

Currently, the incidence of SSEH is expected to increase. Pain physicians must include SSEH in their differential diagnosis for patients with axial pain or radicular symptoms alone, particularly when risk factors are present [1].

Etiology

The cause of bleeding in the current literature is both venous and arterial in origin. Venous bleeding owing is the commonly accepted hypothesis for the source of the hematoma because spinal epidural venous plexus have no sphincters, and thus have no protection against pressure changing [2]. This theory seems to be invalid in the cervical region because the venous pressure is low. It is said that the cervical epidural hematoma has an arterial source from free anastomotic arteries in connection with radicular arteries that exist in the epidural space [3].

Diagnosis

Acute cervical epidural hematoma is definitely a condition of neurologic emergency. Although it is a rare condition, it must be considered in nontraumatic patients with sudden onset of neurologic deficits. Patients with spontaneous spinal epidural hematoma typically present with acute onset of severe back pain, and they rapidly develop signs of compression of the spinal cord or cauda equina [4]

High index of suspicion followed by T2-weighted gradient echo sequences are particularly useful in early diagnosis. [5]

Treatment

Cervical spontaneous spinal epidural hematoma is a serious neurosurgical pathology that often requires prompt surgical intervention.

Prompt surgical evacuation of the hematoma leads to a favorable neurological outcome, whereas delay in treatment can be disastrous. The role of conservative management needs to be proven and should be tailored on an individual basis [6]

Outcome

This is a rare idiopathic condition that leads to acute onset of neurologic deficits, which if not recognized early can have catastrophic consequences.

Case reports

2021

Hines et al. from the Thomas Jefferson University Hospital presented the first case in the literature of cervical disc extrusion provoking epidural hematoma and acute neurological deterioration.

A 65 year old male presented with six months of worsening signs and symptoms of cervical myelopathy. He had progressive deterioration over the course of two weeks leading to ambulatory dysfunction requiring a cane for assistance. While undergoing his medical workup in the emergency department, the patient became acutely plegic in the right lower extremity prompting emergent surgical decompression and stabilization.

Based on imaging, pathology, and intraoperative findings, it was concluded that the patient had an extruded disc segment that may have precipitated venous bleeding in the epidural space and findings of acute cervical spinal cord compression. Cervical disc extrusion may lead to venous damage, epidural hematoma, and spinal cord compression. If this unique presentation is recognized and addressed in a timely manner, patient outcomes may still be largely positive as this case demonstrates [7].

2019

A 41-year-old male, diagnosed with SCEH, with a presenting chief complaint of cervical pain followed by progressive quadriparesis and urgency of micturition who was managed surgically.

SCEH is a rare pathologic entity. Due to the high risk of poor neurological outcome without treatment, SCEH should be a diagnostic possibility when the presentation is even slightly suggestive. Prompt surgical evacuation of the hematoma and hemostasis leads to a favorable neurological outcome, whereas delay in treatment can be disastrous [8].

A 31-year-old man who presented with acute onset of neck pain with radicular component with progressive neurologic deficit. Emergent magnetic resonance imaging revealed cervical extradural hematoma with cord compression that was promptly evacuated. Functional recovery was achieved within 48 hours. The level of preoperative neurologic deficit and its severity, as well as operative interval, are important factors significantly affecting the postoperative outcome [9]

A 28-year-old healthy man developed a sudden onset of severe neck and right shoulder pain with mild arm weakness. The MRI revealed an SSEH that was compressing his spinal cord in the right posterolateral epidural space from C2-C6. On the second hospital day, his symptoms suddenly improved, and most of the hematoma had spontaneously resolved Currently, the incidence of SSEH is expected to increase. Pain physicians must include SSEH in their differential diagnosis for patients with axial pain or radicular symptoms alone, particularly when risk factors are present [10].

A 70-year-old man presented with acute onset neck pain with a radicular component and rapidly progressive quadriparesis. Magnetic resonance imaging revealed a posteriorly located cervical extradural hematoma with cord compression that was promptly evacuated. Functional recovery to near normal function occurred within 24 hours of surgery.

SSEH in its true idiopathic form is a rare pathologic entity. Because of the high risk of poor outcome without treatment, SSEH should be a diagnostic possibility when presentation is even slightly suggestive. Prompt surgical evacuation of the hematoma leads to a favorable neurological outcome, whereas delay in treatment can be disastrous. The role of conservative management needs to be proven and should be tailored on an individual basis [11]

A 25-year-old male presented with a history of sudden onset of complete quadriplegia with sensory loss below the neck along with loss of bowel and bladder control. He had no history of any constitutional symptoms. He reported 10 days later. He was managed conservatively and after two weeks of intensive rehabilitation he had complete neural recovery. The spontaneous recovery of neurological impairment is attributed to the spreading of the hematoma throughout the epidural space, thus decreasing the pressure with partial neural recovery. Conservative treatment is a fair option in young patients who present late and show neurological improvement. The neurological status on presentation will guide the further approach to management [12].

1) , 10)
Huh J, Kwak HY, Chung YN, Park SK, Choi YS. Acute Cervical Spontaneous Spinal Epidural Hematoma Presenting with Minimal Neurological Deficits: A Case Report. Anesth Pain Med. 2016 Aug 27;6(5):e40067. eCollection 2016 Oct. PubMed PMID: 27853682; PubMed Central PMCID: PMC5106555.

2) , 5) , 6) , 11)
Gopalkrishnan CV, Dhakoji A, Nair S. Spontaneous cervical epidural hematoma of idiopathic etiology: case report and review of literature. J Spinal Cord Med. 2012 Mar;35(2):113-7. doi: 10.1179/2045772312Y.0000000001. Epub 2012 Feb 4. PMID: 22333537; PMCID: PMC3304555.

3)
Beatty RM, Winston KR. Spontaneous cervical epidural hematoma. A consideration of etiology. J Neurosurg. 1984 Jul;61(1):143-8. doi: 10.3171/jns.1984.61.1.0143. PMID: 6726389.

4) , 9)
Salehpour F, Mirzaei F, Kazemzadeh M, Alavi SAN. Spontaneous Epidural Hematoma of Cervical Spine. Int J Spine Surg. 2018 Mar 30;12(1):26-29. doi: 10.14444/5005. PMID: 30280079; PMCID: PMC6162037.

7)
Hines K, Hafazalla K, Bailey JW, Jallo J. Extruded disc causes acute cervical epidural hematoma and

cord compression: a case report. Spinal Cord Ser Cases. 2021 May 21;7(1):39. doi: 10.1038/s41394-021-00403-8. PMID: 34021115.
8)

Taha MM, Elsharkawy AM, Al Menshawy HA, AlBakry A. Spontaneous cervical epidural hematoma: A case report and review of literature. Surg Neurol Int. 2019 Dec 13;10:247. doi: 10.25259/SNI_543_2019. PMID: 31893148; PMCID: PMC6935966.
12)

Halim TA, Nigam V, Tandon V, Chhabra HS. Spontaneous cervical epidural hematoma: report of a case managed conservatively. Indian J Orthop. 2008 Jul;42(3):357-9. doi: 10.4103/0019-5413.41863. PMID: 19753167; PMCID: PMC2739458.

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