



Case Report

Spinal intramedullary hematoma presenting years following a cervical epidural injection

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ABSTRACT

Background: Intramedullary cervical cystic lesions are typically attributed to tumors, infection, or trauma. Here, a patient newly presented with quadriplegia due to a chronic cervical intramedullary hematoma attributed to a cervical epidural steroid injection (CESI) performed 4 years earlier.

Case Description: A 38-year-old patient had a CESI in 2014. Resulting in a transient quadriplegia attributed to an inadvertent intramedullary cord injection. Now, at age 42, she presented with a recurrent cervical myelopathy due to an MR-documented C3-C6 intramedullary cystic lesion that at surgery proved to be a chronic liquified hematoma rather than a syrinx.

Conclusion: CESI can result in inadvertent intramedullary hemorrhages and spinal cord injuries. Here, a 42-year-old female presented with recurrent myelopathy due to a chronic intramedullary C3-C6 cervical hematoma attributed a prior intramedullary CESI injection performed 4 years previously.

Keywords: Epidural, Injection, Intramedullary, Hematoma, Spine

INTRODUCTION

Intramedullary cervical cystic lesions are typically attributed to; intramedullary tumors, syringomyelia, hematomyelia, and intramedullary abscesses.^[1,4,7,8] Here, we describe a patient with a recurrent quadriplegia due to an intramedullary chronic C3-C6 hematoma attributed to an inadvertent intramedullary cervical epidural steroid injection (CESI) performed 4 years ago.

CASE DESCRIPTION

A now 42-year-old patient underwent a CESI for neck pain in 2014. The procedure was aborted when she developed the acute onset of electrical shock sensations (Lhermitte's Signs) running down the entire spine and a transient quadriplegia (i.e., that lasted 1 week). Four years later, the patient presented with a recurrent quadriplegia attributed to a cervical MRI-documented intramedullary cyst spanning the C3-C6 levels that did not enhance with contrast. Although the original diagnosis was an idiopathic syrinx, at surgery consisting of a myelotomy, it proved to be a chronic liquified hematoma [Figure 1]. Within the next 8 postoperative weeks, the patient's motor strength and

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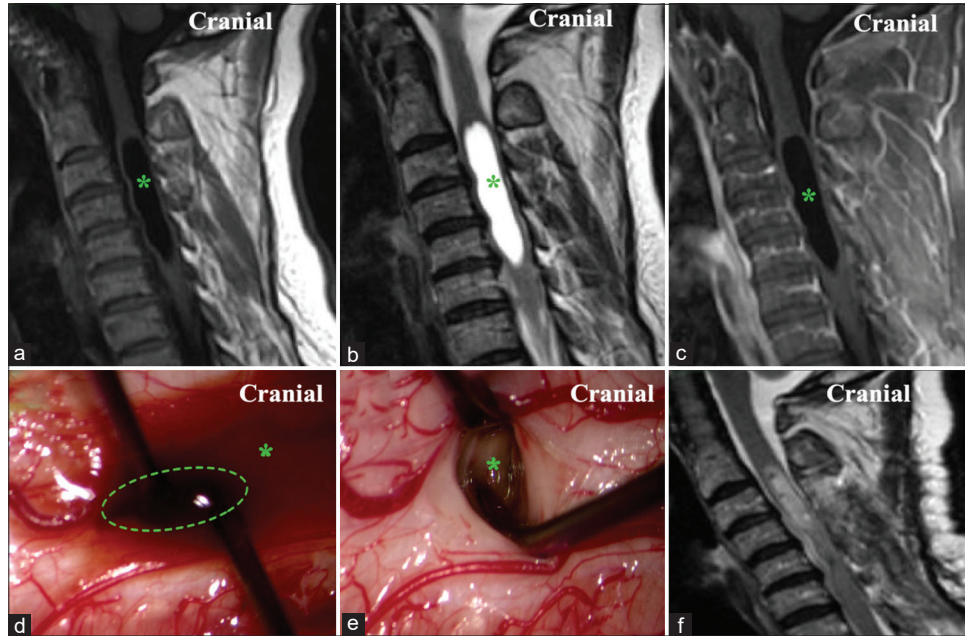


Figure 1 : (a) Preoperative MRI T1 sequence of the cervical spine (sagittal view) shows a cystic lesion involving the cervical spinal cord (*). (b) Preoperative MRI T2 sequence of the cervical spine (sagittal view) shows a cystic lesion involving the cervical spinal cord (*). (c) Preoperative MRI T1 sequence with contrast of the cervical spine (sagittal view) shows a cystic lesion involving the cervical spinal cord (*). (d) Intraoperative image ($\times 50$) shows the midline myelotomy (*) to decompress the cyst. (e) Intraoperative image ($\times 50$) shows the old liquified hematoma emerging from the myelotomy (*). (f) Postoperative MRI T2 sequence of the cervical spine (sagittal view) shows the spinal cord after decompression of the intramedullary hematoma (*).

sensation improved, and the 8 MR confirmed adequate decompression of the cyst and residual C3-C6 myelomalacia.

DISCUSSION

The differential diagnosis of intramedullary cervical cord cystic lesions include; primary and metastatic tumors, syringomyelia, hydromyelia, infection, and hematomyelia.^[1,4,7,8] CESI may contribute to spinal epidural hematomas and intramedullary cord injections/hematomyelia.^[2,3,5,6,9] In this case, the patient's the MRI-documented intramedullary C3-C6 cystic lesion proved at surgery (i.e. midline myelotomy) to be a chronic intramedullary hematoma. In retrospect, it was attributed to the CESI performed 4 years previously.

CONCLUSION

Delayed chronic spinal cord intramedullary hematomas can develop, as in this case, up to 4 years following CESI. Here, direct surgical decompression resulted not only in neurological improvement, but also confirmed the diagnosis of an intramedullary hematoma attributed to the prior CESI.

Declaration of patient consent

Patient's consent not required as patients identity is not disclosed or compromised.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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