Reminder of important clinical lesson

Acute disc prolapse secondary to seizure

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Summary

A 37-year-old female presented following a witnessed generalised tonic clonic seizure while washing her car. Witnesses reported the patient hit her head on the car bumper upon falling. She was investigated for a cause of a second seizure with blood tests, CT and MR brain which were normal. On day 3 of her admission she was still unable to walk since the seizure and a neurological examination was performed which revealed signs consistent with a cervical myelopathy. A cervical MRI scan revealed a disc prolapse with cord compression at C5/6. This was successfully operated and the patient made a good recovery.

Given that many of our medical assessment units and emergency department frequently assess patient with seizures, there was an important lesson for us to be more aware of the consequences as well as the cause of seizures.

BACKGROUND

The general medical on call presents itself with a number of cases of generalised seizures on a weekly basis and we wanted to highlight the importance of taking a clear history, neurological examination to prevent missed complications occurring following falls from seizure activity.

CASE PRESENTATION

A 37-year-old female presented following a witnessed generalised tonic clonic seizure while washing her car. The patient reported an aura consisting of déjà-vu and visual disturbance with flashing lights. During the seizure, the patient had bit her tongue but had no urinary incontinence. Witnesses reported the patient hit her head on the car bumper upon falling. Subsequent to the seizure she was documented to have decreased consciousness lasting approximately 10 min.

On arrival at hospital, the patient reported feeling tired, generally weak and having pins and needles in her hands and feet. The patient was also unable to walk as she reported feeling unsteady on her feet.

The patient reported a similar seizure episode 3 years ago while on holiday which was investigated. MR brain and EEG were normal and the patient was not commenced on any antiepileptic medications.

On admission, no infectious or metabolic cause was identified and no focal neurology was ascertained. A CT brain was requested which revealed an abnormal pineal gland with calcification, but no evidence of haemorrhage.

In view of the abnormality on CT scan, an MR brain was arranged which revealed a calcified pineal cyst, no hydrocephalus and no other focal abnormality. The case was discussed with the neurosurgical team who planned to review the images in their neuroradiology multidisciplinary team.

The patient was transferred to a medical ward; however, 3 days later was still unable to mobilise due to

unsteadiness on her feet. The patient still had parasthesia of her hands and feet.

The patient was re-examined neurologically which showed 'global hypertonia, pyramidal pattern weakness with a power score of 4/5 on Medical Research Council grading, hyperreflexia throughout upper and lower limbs with associated bilateral positive Hoffmanns sign, pectoral jerks, cross adductors, clonus and extensor plantar reflexes. There was evidence of a spastic gait and distal sensory limb disturbance with loss of temperature sensation C7/8 and T1 distribution bilaterally. Jaw jerk was negative and joint position sense remained intact. No spinal tenderness and normal neck movements. Visual fields were normal and cranial nerves were all intact.

An MRI of the spine (figure 1) was requested urgently which revealed 'normal vertebral alignment of the cervical and thoracic vertebra with reasonably preserved disc hydration and height. There is, however a disc prolapse at C5/6 with a moderate size posterior disc prolapse which is narrowing the spinal canal compressing the theca and the cord at this level with high signal seen within the cord in keeping with myelopathy secondary to the compression. No evidence of haematoma'.

Following rediscussion with the neurosurgical team, the patient was commenced on dexamethasone to reduce the inflammation at the site and was listed for urgent decompressive surgery.

As this was her second episode of seizure she was also started on lamotrigine and told to inform the Driver and Vehicle Licensing Agency.

OUTCOME AND FOLLOW-UP

The patient underwent decompressive surgery from which there were no immediate complications and the patient made a full recovery.

Figure 1 Cervical MRI of patient.

DISCUSSION

We have presented this case of acute disc prolapse causing cervical myelopathy secondary to neck injury sustained after a seizure; a complication which is not well documented in the literature. The presence of an incidental pineal cyst diverted the attention away from the clinical signs present and caused a delay in the patients' diagnosis and most appropriate investigations and management.

On reflection, a more thorough neurological history and examination on admission may have guided our investigations better. The medical investigation was focused at finding the cause of the seizure but initially did not consider the possible adverse consequences of the traumatic fall during the seizure. In some cases it may be plausible that patients may present with an unstable cervical fracture requiring more urgent neck stabilisation.

Given that many of our medical assessment units and emergency department frequently assess patient with

seizures, there was an important lesson for us to be more aware of the consequences as well as the cause of seizures.

Learning points

- ▶ The importance of taking a clear history of events leading up to and after the seizure.
- ▶ The importance of documenting a thorough and clear neurological examination.
- ▶ To be aware of the consequences of a traumatic fall following a seizure.

Competing interests None.

Patient consent Obtained.

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