

EMERGENCY CASEBOOKS

Spontaneous spinal epidural haematoma: an unusual cause of neck pain

Paul Gaffney, J A Guthrie

A 70 year old Afro-Caribbean man presented with sudden onset of neck pain and the subsequent development of progressive right sided weakness and numbness in his right leg. On examination he was an obese man with a blood pressure of 234/136 mm Hg while lying down. The patient's Glasgow Coma Score was 15. He had grade 4/5 power in his right arm and grade 3/5 in his right leg. Fine touch sensation was reduced in his right leg. It was painful to move his neck in all directions and the range of movement was reduced. Plain films of the neck showed degenerative change, without evidence of malignancy. Baseline blood analyses, including a platelet count and coagulation screen were normal. Computed tomography of the patient's head was negative for subarachnoid blood. On returning from the scanning unit the patient reported that the numbness had spread to his abdomen. Initially this was at the T10 level but it progressed to T6. Emergency magnetic resonance imaging (MRI) of the patient's cervical spine was requested (fig 1). This revealed an epidural haematoma at the level of C3, causing cord compression and anterolateral shift. The patient underwent cervical laminectomy and evacuation of epidural haematoma. He made a full neurological recovery and was discharged home exactly six weeks after admission. Histopathological examination revealed only fresh clot.

Spinal cord compression needs to be diagnosed early as the more advanced the myelopathy at presentation, the worse the prognosis. This medical emergency poses particular problems for accident and emergency (A&E) staff as subtle early signs can be obscured further by painful underlying lesions. Spinal epidural haematomata may be either primary (spontaneous) or secondary. Trauma, including epidural puncture, arteriovenous malformations, bleeding disorders and spinal tumours are listed among the secondary causes. Spontaneous spinal epidural haematomata are rare with an estimated incidence of 0.1 case per 100 000 population per year.¹

MRI is the investigation of choice to confirm the diagnosis of spinal epidural haematomata. Despite limitations in terms of technical factors, cost and availability, MRI can help



Figure 1 Magnetic resonance imaging of the patients' cervical spine.

define the nature and extent of the spinal epidural haematomata as well as the degree of cord compression. As the soft tissue contrast resolution is superior for MRI than other investigations such as computed tomography, smaller and less clinically significant spinal epidural haematomata will be diagnosed and surgery may not always be necessary. Spinal epidural haematomata show variable signal intensity, being isointense to slightly hyperintense on T1 weighted images and hyperintense with areas of hypointensity on T2 weighted images. On gradient echo images a low signal curved line delineating fresh blood silhouetted against the dural sac is said to be a useful sign.² Computed tomography remains useful if MRI is unavailable.

In the correct clinical setting, a spinal epidural haematoma is important to consider in the differential diagnosis of acute neck or back pain. Spinal cord compression can be a

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difficult diagnosis to make in the A&E department. Subtle signs need to be carefully looked for when the history raises compression as a possible diagnosis. The absence of signs does not outrule the diagnosis and, when symptoms are suggestive but signs are lacking, early consultation with the relevant specialty is appropriate. Prompt diagnosis and im-

proved prognosis may depend on urgent access to advanced imaging techniques such as MRI.

- 1 Holtas S, Heiling M, Lonntoft M. Spontaneous spinal epidural haematoma: findings at MR imaging and clinical correlation. *Radiology* 1992;199:409–13.
- 2 Sklar E, Donovan Post J, Falcone S. MRI of acute spinal epidural hematomas. *J Comput Assist Tomogr* 1999;23:238–43.

Late presentation of diaphragmatic hernia and gastric volvulus

L Somers, I Szeki, D Hulbert

A 58 year old woman presented with a three week history of increasing epigastric pain and nausea. Her past medical history included a road traffic accident six years previously when she sustained fractures through the superior and inferior left pubic rami. Chest radiography showed a dilated gastric shadow with a fluid level (fig 1).

A barium swallow demonstrated a large paraoesophageal hernia with a gastric volvulus and hernial outlet obstruction (fig 2).

At operation the stomach had herniated through a defect in the left diaphragm.

The late presentation of a ruptured diaphragm is well recognised, and may occur up to 30 years after the original event.¹

However, in delayed presentation the significance of previous trauma may be overlooked when concentrating on the apparently recent symptoms.²

Other injuries are commonly associated with diaphragmatic rupture and pelvic fracture occurs in 15% to 25% of cases.²

Gastric volvulus is an abnormal rotation of the stomach. Most commonly the greater curve moves upwards to lie under the cupola of the left diaphragm.

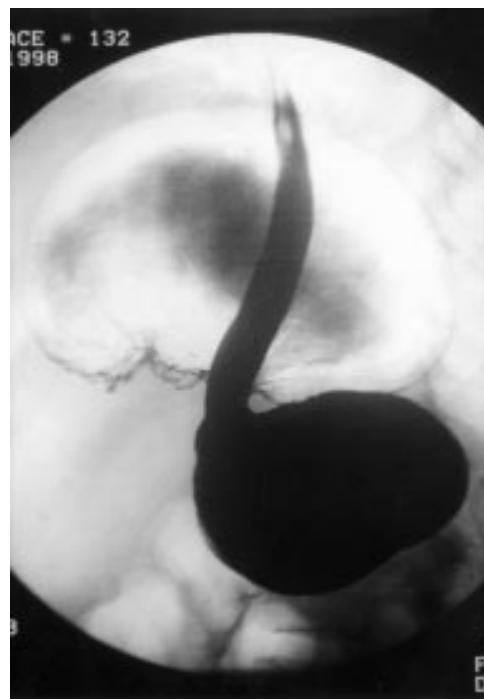


Figure 2 Barium swallow taken after second presentation to accident and emergency.

For volvulus to occur the points of tethering must be stretched and weakened. This can occur in patients with connective tissue disorders (for example, Ehlers-Danlos syndrome) and in conditions where there is extra space into which the stomach can be pulled (for example, diaphragmatic hernia).

As gastric volvulus is itself rare,³ its coexistence with traumatic diaphragmatic hernia in this case made the diagnosis more difficult.

Diaphragmatic injury should always be considered in patients who have previously sustained trauma who subsequently present with unexplained abdominal pain.

- 1 Cameron EW, Mirvis SE. Ruptured hemidiaphragm: unusual late presentation. *J Emerg Med* 1996;14:53–8.
- 2 Johnson CD. Blunt injuries of the diaphragm. *Br J Surg* 1998;75:226–30.
- 3 Wastell C, Ellis H. Volvulus of the stomach; a review with a report of eight cases. *Br J Surg* 1971;58:557–62.

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Figure 1 Chest radiograph taken at second presentation to accident and emergency.

Self insertion of urethral foreign bodies

Gareth Quin, Gerard McCarthy

The insertion of foreign bodies into the urethra is an unusual, though well documented, practice in which a wide variety of objects has been implicated.¹⁻³ The activity principally occurs during pathological masturbation, intoxication, or as a consequence of psychiatric disturbance. The foreign body may disappear into the urethra or remain visible at the meatus. In the latter instance, we feel simple removal by traction is likely to be unsuccessful, if not harmful, as illustrated by the following two cases.

A 36 year old man attended the accident and emergency (A&E) department complaining of dysuria and frequency of micturition. He stated that two days previously, while at a stag party, his friends had inserted an unknown length of tennis wire into his penis, and he had subsequently been unable to remove it. Examination revealed the presence of a length of coiled nylon wire, 2–3 mm in diameter, protruding from the urethra. Attempts to remove the wire using gentle traction failed and the patient was admitted for cystoscopy.

This revealed a knotted coil of wire filling the bladder, which was removed through a suprapubic cystostomy.

A 36 year old man attended the A&E department complaining of a problem with his penis and dysuria. He had inserted the outer plastic sheath of a cable into his penis “for kicks” some two hours previously, and was now unable to remove it. He was unsure what length he had inserted. Examination revealed a length of hollow plastic tubing approximately 4–5 mm in diameter protruding from the urethra. Attempts to remove the cable using gentle traction proved unsuccessful. Radiography of the lower genitourinary tract revealed a knot of cable within the bladder (fig 1). The foreign body was subsequently removed at cystoscopy.

The clinical presentation of urethral foreign bodies is variable. If the object has disappeared into the urethra, urinary frequency, dysuria, poor stream, haematuria, and urinary retention are the usual symptoms.⁴ Many of these cases present to urology outpatients. If the possibility of a retained urethral foreign body is raised in A&E, plain radiography of the genitourinary tract often provides the answer.⁵

If the foreign body remains protruding from the urethral meatus, though the diagnosis is obvious, the management is less straightforward than it would initially appear. Long, flexible foreign bodies tend to knot in the bladder, and this bar to removal may be visible on plain radiography. While it is tempting to attempt removal by traction in these cases, thought should be given to establishing what is concealed to prevent urethral trauma on removal. Urological referral for operative removal and follow up is usually required.

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Figure 1 Plain radiograph of the lower genitourinary tract showing urethral foreign body coiled in the bladder.

- 1 Wenderoth U, Jonas U. Curiosity in urology? Masturbation injuries. *Eur Urol* 1980;6:312–3.
- 2 Granados EA, Riley G, Rios GJ, *et al.* Self introduction of urethrovesical foreign bodies. *Eur Urol* 1991;19:259–61.
- 3 Costa G, Di Tonnio F, Capodiecici S, *et al.* Self introduction of foreign bodies into the urethra: a multidisciplinary problem. *Int Urol Nephrol* 1993;25:77–81.
- 4 Aliabadi H, Cass AS, Gleich P, *et al.* Self-inflicted foreign bodies involving lower urinary tract and male genitals. *Urology* 1985;26:12–16.
- 5 Eckford SD, Persad RA, Brewster SF, *et al.* Intravesical foreign bodies: five year review. *Br J Urol* 1992;69:41–5.

An unusual cause of pilonidal sinus

J P Sloan, J Brenchley

A 55 year old abattoir worker presented to the local minor injury unit with a two day history of pain and swelling of third web space of his left hand. He thought this might have been attributable to a thorn from a sheep's fleece breaking the skin. This was initially treated as a soft tissue infection with elevation, oral antibiotics and GP follow up. He returned two days later as there had been no improvement and was encouraged to continue with the treatment and to return if necessary.

He presented again two months later concerned that there was a foreign body in the same hand, which was again getting infected. Exploration under local anaesthetic was performed but no foreign body found, so the wound was packed and he was treated with further antibiotics and reviewed over the course of the next week.

He returned six weeks later as the wound had still not healed. At this stage he had a granulomatous lesion over the site of the initial injury that was thought initially to be a pyogenic granuloma. Ultrasound imaging of the area showed a hypoechoic area consistent with chronic inflammation and a linear hyperechoic structure measuring 4.25 mm thought to be a thorn or splinter (fig 1). The lesion was then explored under local anaesthesia and a pilonidal track found that was excised completely. It was filled with animal hairs. The wound was again packed and over the course of the next six weeks healed completely. The lesion was sent for histological examination, which showed evidence of acute and chronic inflammation.

Discussion

Pilonidal sinuses of the hand are a recognised occupational hazard in hairdressers¹ but there

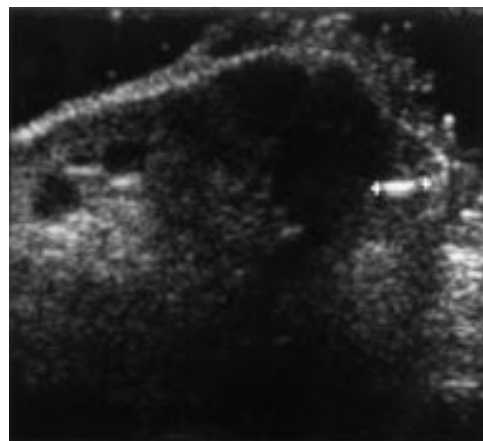


Figure 1 Ultrasound image of lesion showing pilonidal track (marked).

are no reports in the literature of similar cases in slaughtermen. It is a diagnosis to bear in mind in cases of non-healing infection. Clearly prompt recognition of the condition and definitive treatment on presentation would have allowed complete resolution in this case some four months earlier than actually happened. It may be sensible to follow up patients with hand infections until resolution has occurred. Ultrasound has not previously been widely used in the diagnosis of pilonidal disease but here was crucial to the diagnosis and we suggest that in similar cases early ultrasound scanning would allow a definitive diagnosis.

1 Patel MR, Bassini L, Mashad R, *et al*. Barber's inter-digital pilonidal sinus of the hand: a foreign body hair granuloma. *J Hand Surg [Am]* 1990; 15:652-5.

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