EMERGENCY CASEBOOKS

Two cases of near asphyxiation in children, using non-releasing plastic garden ties

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We present two cases of children recently seen in our accident and emergency (A&E) depart-
ment with near asphyxiation attributable to non-releasing plastic garden ties around the
neck.

Case 1
A 6 year old boy presented after his older
brother had put a non-releasing garden tie
around his neck during unsupervised play in
the garden. He was unable to release the tie
and in his attempt to do so, pulled it tighter.
Fortunately, his grandmother was quick to
respond and cut the tie off with kitchen
scissors. On examination, he had petechiae
over his face but neither neck swelling or
apparent trauma to his larynx. He had a 1 cm
× 1 cm, V shaped laceration to his neck where
the tie had been cut off. He required no treat-
ment other than a warning of the obvious dan-
gers of his actions.

Case 2
A 10 year old boy arrived as a helicopter trans-
fer to the Birmingham Children's Hospital
Accident and Emergency Department after
near asphyxiation secondary to a similar but
larger non-releasing tie around the neck. This
incident occurred on a golf course and his
father's attempts to remove it only served to
tighten it further. No one had a sharp
implement to hand and the ligature was in
place for 5–10 minutes before finally being
removed. When the paramedic team arrived,
the child was unresponsive but self ventilating.
On assessment in the A&E department he had
facial congestion with central cyanosis with
extensive well demarcated petechial haemor-
rhages from the neck upward and bilateral
conjunctival haemorrhages (fig 1). He was
extremely agitated and confused, being totally
uncooperative. He was stabalised, intubated
and ventilated. Subsequently he underwent
computed tomography, which showed mild
cerebral oedema. He was transferred to the
paediatric intensive care unit for monitoring
and was extubated that evening with no
apparent neurological deficit. He was ob-
erved for a further 48 hours and was
fortunate to survive this episode without
sustaining major neurological injury.

Discussion
There are no similar reported cases of near
asphyxiation of these widely available garden
ties. Some reported cases of asphyxiation in
children include accidental strangulation in-
cluding drawstrings, car electric windows, and
stroller prams. All these cases proved fatal.

Clinical features of ligature strangulation
resemble those of non-judicial hanging as there
is no significant drop involved and injury
occurs secondary to compression of neck
structures. The features include marks around
the neck from the device used for hanging as
well as skin and subconjunctival petechial
haemorrhages because of increased venous
pressure. These are not invariable but were
found in both cases presented here.

The treatment of both our patients was prin-
cipally supportive with endotracheal intuba-
tion as necessary. Cervical spine injury has not
been reported and is unlikely in ligature stran-
gulation victims. As in one of our cases severe
Epidural abscess misdiagnosed as cholecystitis

F Lam, M Hynes

A 65 year old man presented to the accident and emergency department with a four week history of worsening pain in the right upper quadrant of his abdomen. There was no history of jaundice or change in appearance of his stools or urine. On admission, he was feverish with a temperature of 37.8°C and his abdomen was soft and non-tender. Blood tests revealed a neutrophilia of 16 with a raised C reactive protein at 180. Apart from an increased alkaline phosphatase of 160, the rest of the liver function tests were all within normal limits.

Ultrasound showed multiple gall stones with no evidence of biliary obstruction. A preliminary diagnosis of acute cholecystitis was made, and he was treated with intravenous antibiotics.

On the following day, he developed sudden onset flaccid paralysis of his right lower limb with acute urinary retention. Rectal examination revealed loss of contraction of the anal sphincter. Magnetic resonance imaging (see figs 1 and 2) confirmed the clinical diagnosis of acute cholecystitis was made, and he was treated with intravenous antibiotics.

Neurological symptoms in his lower limb required urgent specialist referral. He was able to stand with crutches. This case illustrates several important learning points. Firstly, extra-abdominal pathology including those arising from the spine must be considered in the evaluation of a patient with abdominal pain. Secondly, liver function tests are not specific for liver disease, for example, alkaline phosphatase may also be raised in disease processes of bone, intestine and prostate. Finally, any patient presenting with acute neurological symptoms such as paralysis or a sensory level, requires urgent specialist referral as a delay in diagnosis and treatment correlates with a poor prognosis.

Epidural abscess after dental extraction

B J Burgess

A 20 year old woman attended the accident and emergency department complaining of right sided neck pain three days after extraction of a wisdom tooth under general anaesthetic. The physical examination was consistent with a musculoskeletal neck sprain resulting from posture during the extraction and the patient was discharged with a soft cervical collar, non-steroidal analgesia and referred to physiotherapy. She returned three days later (six days after the original procedure) complaining of increased right sided neck pain and a sensation of numbness to the right arm. On examination she was found to have no neurological deficit but was found to be very tender over the C5 spinous process and marked tenderness was found on the right side of the neck. A radiograph was normal and further analgesia was prescribed.

The patient was referred to the on call orthopaedic team by the general practitioner three days later (nine days after the original presentation) with severe neck pain and having developed a paresis in her right arm and right leg. Later that day she developed a right sided paralysis in addition to a left sided paresis. The patient was sent for computed tomography and subsequent magnetic resonance imaging (MRI), which revealed an epidural abscess to the right side of C4/C5 vertebrae with an abnormal signal from within the cord at this level. This was also found to communicate with a large pre-vertebral collection (see fig 1). She was then urgently given intravenous antibiotics and referred to the on call neurosurgical team for drainage of the abscess and cord decompression. A total recovery resulted to the left arm and left leg. However, paralysis persisted to the right arm and right leg.

This case report is only the second recorded episode of an epidural abscess resulting from a dental extraction. The diagnosis of an epidural abscess was made by MRI, which is currently regarded as gold standard. The abscess is mainly caused by local and haematogenous spread. Blood cultures showed the presence of Streptococcus milleri, which is a known mouth commensal and an uncommon cause of epidural abscess. Culture of the abscess after surgical decompression revealed Corynebacteria, which are non-specific for an oral cause. The difficulty with the differential diagnosis of acute torticollis has been previously eluded to and the vital importance of early diagnosis leading to early treatment is well documented.

It also exemplifies a serious underlying disorder with an apparent innocuous cause.

Epidural abscess after dental extraction

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