EXTRADURAL HAEMATOMA OF THE POSTERIOR FOSSA

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Extradural haematoma of the posterior fossa is not an uncommon condition. Its presentation is clinically different from the extradural haematoma resulting from a torn middle meningeal artery. It is usually insidious in its presentation and if not recognized early and afforded timely evacuation, it may have a high mortality rate. The following are records of 3 cases encountered in the space of 6 months.

CASE REPORTS

1. J.G., aged 17 years

This patient fell from a horse at 3 o'clock one afternoon. She did not lose consciousness but was dazed. She vomited a few times and complained of a severe headache, and a few hours later became drowsy and was admitted to a hospital under the care of a physician.

Her condition remained unchanged until 3 a.m., twelve hours after the accident. At this time her respiratory rate dropped from 24 to 16 per minute. Her condition rapidly deteriorated and she became comatose, whereupon neurosurgical help was summoned.

In view of the gravity of the situation, only a cursory examination was possible. The patient was in deep coma, responding slightly to painful stimulation, withdrawing the left limbs feebly. Her respirations were deep and sighing at the rate of 6 per minute, and her pulse rate was about 140 per minute. Both pupils were dilated and fixed and she was in a state of complete areflexia.

She was immediately taken to the theatre, but stopped breathing on arrival there. She was intubated and bag breathing was instituted. A right temporal burr hole was made but no extradural haematoma was encountered. A posterior fossa burr hole was then made and a large extradural haematoma was found in relation to a fracture traversing the transverse sinus. Spontaneous respirations resumed shortly after the evacuation. Her recovery was uneventful and she left hospital 2 weeks later with slight residual horizontal nystagmus and left rectus-oculi paresis. She has since made a complete recovery.

2. M.I., aged 35 years

This patient was assaulted with a blunt instrument. He lost consciousness but regained it by the time of admission 2 hours later. His scalp was tightly stretched over a large subgaleal vertical haematoma. His pulse rate was 84 per minute and his respirations 18 per minute. There was marked neck rigidity and the patient was obviously in great pain. There were no lateralizing signs.

X-ray of the skull showed an extensive fracture traversing the sagittal sinus immediately in front of the external occipital protruberance. An incision into the scalp allowed a large subgaleal haematoma to escape. A burr hole placed behind the fracture line revealed a large extradural haematoma, which was evacuated. The bleeding came from the sagittal sinus. The patient's condition remained critical; on the third day he contracted bronchopneumonia and died.

At postmortem examination extensive contusion of the cerebral hemispheres and a small collection of blood in the extradural space of the posterior fossa were seen.

3. M.C., aged 40 years

This patient was admitted to hospital in a semi-stuporose state following a motor-car accident. He complained of severe headache and pain in the nape of his neck. His breathing was regular but at a rate of only 16 per minute, and his pulse was 120 per minute.

He presented with horizontal nystagmus to the left, and slight weakness of the limbs on the left side. All his reflexes were depressed and bilateral Babinski responses were present.

X-ray of his skull demonstrated a fracture in the left parietal region extending posteriorly into the foramen magnum.

At operation, a large extradural haematoma was encountered in the posterior fossa. Bleeding came from the transverse sinus. His recovery was complete and uneventful.

DISCUSSION

Extradural haematoma of the posterior fossa is not uncommon, and it is of paramount importance that it should be suspected when there is marked disproportion between the respiratory and pulse rates. The respiratory rate is characteristically slow and the pulse rate normal or raised. Also, it should be considered when skull X-rays show a fracture traversing the transverse or sagittal sinuses or the confluence of sinuses. The headache and pain in the nape of the neck are severe and characteristically out of proportion to the other signs and symptoms if the patient is conscious.

The signs may vary from a disturbance of respiratory rate only, to cerebellar signs or other signs of involvement of the long spinal tracts. The haematoma is invariably caused by a venous ooze and for that reason will take some hours to develop. This type is more liable to be missed than the extradural haematoma caused by a torn middle meningeal vessel.

When the condition is diagnosed, urgency to evacuate the haematoma is important, and when the condition is desperate, as in case 1, no time should be lost on shaving the scalp or sterilization of instruments.

The haematoma can be evacuated through a suitably placed burr hole, perferably off-centre below the superior nuchal line, but in order to secure adequate haemostasis, a craniectomy of 3 - 4 cm. in diameter should be done.

A lumbar puncture is contra-indicated. Other investigations, e.g. an air encephalogram or angiography, may not be helpful and may be time-consuming.

SUMMARY

1. Three case records of patients with an extradural haematoma of the posterior fossa are presented.

2. The condition may present with a slow respiratory rate associated with a normal or raised pulse rate.

3. Cerebellar signs may be present in the conscious patient.

4. Pain is a prominent symptom.

5. The condition is suspected when a fracture line traverses the larger venous sinuses in the posterior fossa.

6. Speed in its evacuation is imperative in the desperate case.