Facial ecchymosis and periorbital oedema

CASE HISTORY
A previously healthy 21-year-old man was admitted to the emergency department a short time after being trapped while working under his car when the jack gave away. The patient remained under the vehicle, which was compressing his anterior chest, until the fellow workers were able to remove the victim after approximately 6 min.

The patient arrived at hospital with stable vital signs and no loss of consciousness.

A bilateral subconjunctival and periorbital haemorrhages, generalised facial and neck petechiae and ecchymosis, as well as a dusky cyanosis on the upper chest were noted (figure 1).

Roentgenograms and CT of the head, thorax and abdomen showed no abnormalities. An ophthalmology examination revealed no visual or orbital defects.

QUESTION
What is most likely diagnosis?
A. Allergic reaction
B. Fractures of the facial bones
C. Perthe’s syndrome
D. Raccoon eyes

For the answer see page 572

Figure 1  Picture of the patient 10 h after admission, showing facial oedema and cyanosis, generalised facial and neck petechiae and subconjunctival haemorrhage.
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From the question on page 556.

ANSWER: C

Facial ecchymosis and periorbital oedema have several aetiologies such as fractures of the facial bones and fractures of the base of the skull (also called raccoon eye) which are confirmed by radiographic findings. However, traumatic asphyxia, also known as Perthe’s syndrome is a clinical syndrome characterised by cervicofacial cyanosis, petichial haemorrhages on the upper chest and face and massive haemorrhage in subconjunctival and periorbital areas.1,2

In most instances, it results from severe, sudden and transient compression of the chest or upper abdomen with complete or partial cessation of respiration for varying periods of time.3 This compression leads to dramatic increase in intrathoracic pressure, and massive reflux of blood out from the right side of the heart through the essentially valveless innominate. This mechanism explains the rapid dilatation of the cutaneous capillaries and venules with minute haemorrhages leading to petechiae only above the upper portion of the chest.4

The diagnosis is usually made on history and physical findings.5 The only effective treatment is rapid decompression of the chest. This disorder is usually harmless; however, in less than 10% of the patients, a prolonged thoracic compression could lead to cerebral anoxia and neurological sequelae.2

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