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Unexpected Site of Haematoma on Post-Traumatic Neuroimaging of a Child

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Case Presentation

An 8-year-old boy was riding a bicycle when a lorry hit him. He was thrown to the ground, and lost consciousness. There was no external bleeding noted by eyewitnesses. He was immediately brought to a nearby health center.

Upon arrival in a tertiary hospital, his GCS was E1V1M3 (5/15) and he was immediately intubated. His blood pressure was 100/49mmHg with pulse rate of 180 beats per minute. There was bruising at the right clavicle and left anterior chest wall. However, the percussion and auscultation was normal. The rest of the examinations were unremarkable.

CT brain and thorax was performed. There was hyperdensity in the posterior fossa just posterior to the clivus, extending to C2 level, in keeping with acute haematoma (Figure 1). No mass effect to the cerebellum or brainstem was seen. Additionally, mild cerebral oedema was seen. Lung contusions and small mediastinal haematoma were present.



Figure 1 Axial and sagittal reconstruction of CT brain showing acute haematoma in the posterior fossa (thin arrows). Thick arrow shows that the haematoma extends to C2 vertebral level.

Question 1: Name the intracranial compartment in which the acute haematoma is seen in Figure 1.

- A. Subarachnoid space
- B. Subdural space
- C. Extradural / epidural space
- D. Intraparenchymal region
- E. Intraventricular region

Question 2: What is the most appropriate clinical management for this patient?

- A. Immediate emergency surgery with follow up imaging
- B. Immediate emergency surgery without follow up imaging
- C. Elective surgery after an interval period, with follow up imaging
- D. Conservative treatment with follow up imaging
- E. Conservative treatment without follow up imaging