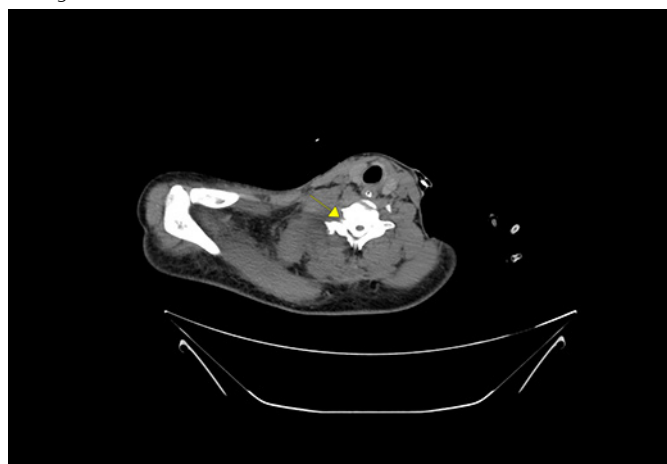


Fig. 1. CT brain scan obtained after admission to ICU

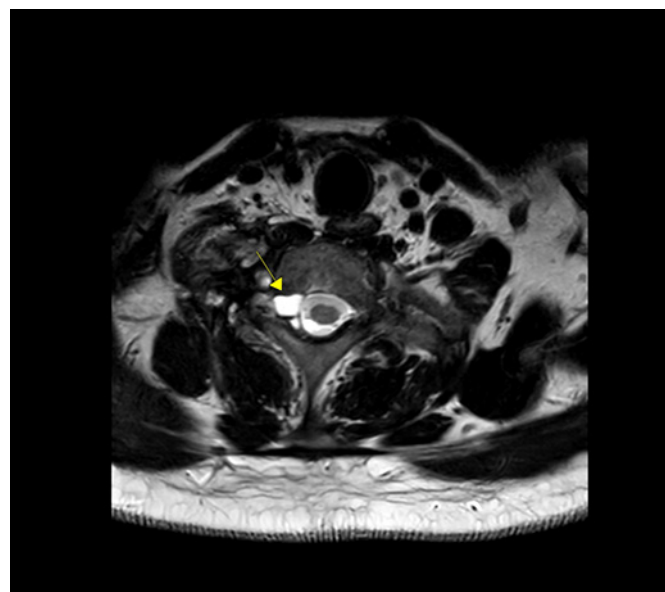
in consciousness, which was consistent with the changes in ICP levels. Higher ICP levels were associated with a better state of consciousness.

Due to the observed correlation between improved consciousness and elevated ICP, concerns arose regarding CSF leakage. However, a magnetic resonance (MRI) scan was performed, revealing an unexpected C5 and C6 root avulsion without any signs of vertebrae trauma. Because of this finding, CT perimyelography was performed revealing CSF leakage through the C5 and C6 root avulsion as depicted in Fig. 2.

Fig. 2. CT perimyelography. The arrow indicates C5 root avulsion with leakage of contrast fluid showing probable location of cerebrospinal fluid leakage

After the finding, the patient was positioned in the dorsal recumbent position. The ICP stabilized spontaneously at around 3 mm Hg on the 4th day following admission. The patient regained full consciousness and was extubated on the 5th day and discharged from the ICU on the 6th day. After discharge from the ICU, there were no signs of continuous CSF leakage, including follow-up CT perimyelography. A follow-up MRI scan was performed showing signs of pseudomeningocele formation (see Fig. 3). The patient remained in hospital till the 24th day. From the discharge from the

ICU till the discharge from hospital, the management was focused on rehabilitation and analgesia.

Fig.sub 3. Follow-up MRI. The arrow indicates the formation of a pseudomeningocele

The patient underwent brachial plexus reconstruction three months later. During the surgery, C5, C6, and C7 roots were reconstructed with the use of grafts from the posterior division of the upper trunk and suprascapular nerve. Presently, the patient shows paresis of the right arm classified as score 2 on the Neurological Impairment Scale (NIS).

Discussion

Intracranial hypotension is a rare condition that is typically characterized by postural headaches, rarely by coma. Severe cases can be life-threatening. Major severe complications are cerebellar haemorrhage, posterior circulation infarction, brain herniation, and cerebral venous sinus thrombosis [5–7]. Normally, intracranial hypotension causes recurring postural headaches, but coma can rarely be the sole sign, as it was in the presented case [1–2]. IH is rarely associated with trauma. More often, it occurs in neurointensive care units, mostly in association with neurosurgery or ventricular/lumbar drainage. In well-documented cases by Sarrafzadeh, IH was a result of a spine injury with a CSF leak [4]. Interestingly, in our case, there was no spine injury. We only diagnosed avulsions of two roots resulting in CSF leakage. Notably, there was no injury to surrounding vessels.

In most trauma patients, the whole-body CT scan is performed. Nonetheless, the CT scan is not sufficiently sensitive to diagnose IH or CSF leakage. CT may show CSF collections, which can make the diagnosis easier [8]. This was demonstrated by Sarrafzadeh in both documented cases where CSF collection was a key finding. In our case, however, the CSF leak did not form a collection. To prompt further imaging studies, there should be a firm clinical suspicion of IH. In our case, the suspicion was based on a very low and negative ICP and an improvement in the state of consciousness with higher ICP levels. Another imaging method to consider is cranial MRI which can provide the diagnosis in 80% of cases [8, 9]. We performed an MRI scan with the finding of avulsions without clear signs of CSF leakage. Therefore,