Epidural hematoma following chronic subdural hematoma (CSDH) is a rare complication. CSDH is a liquefied blood on the surface of the brain beneath its outer covering occurring most commonly in elderly. They occur in an average age of 56 to 63 years old with an incidence of 1.72 cases per 1.000.000.

The possible cause is atrophy of the brain and minor trauma resulting in slow collection of blood. Treatment consists of surgical evacuation by single or two burr hole, twist drill craniostomy with or without a drain. The complications following evacuation include acute epidural hematoma (EDH) at the same or opposite site, intraparenchymal hematoma, cerebellar hematoma, acute subdural hematoma and infection.

We report a case of CSDH evacuation in a young male following which the patient did not improve and repeat scan showed a massive acute epidural hematoma. The patient underwent emergency craniotomy and evacuation of the EDH following which he improved.

Although uncommon, this complication must be kept in mind in those cases who do not improve clinically after CSDH evacuation or who have signs of deterioration. A urgent computerized tomography (CT) scan and surgical evacuation can help save life and prevent further morbidity.

Key Words: Burr hole, Epidural hematoma, Head injury, Subdural hematoma
Case report

A previously normal 22 year old male was brought to the emergency with history of fall from a ladder in the morning followed by unconsciousness and weakness of the left half of the body. There was no other significant past medical history. On admission to the emergency his Glasgow Coma Score (GCS) was 10/15 with mid-dilated right pupil. There was no other systemic injury except for scalp swelling bilaterally. The hematology, electrolytes and coagulation profile was normal. The CT scan showed a large acute on chronic right sided CSDH with significant mass effect (Figure 1). He underwent single posterior parietal burr hole evacuation of the CSDH without any intraoperative complication followed by closed drainage system with low suction. Postoperatively he was sent to the ICU and after half an hour it was noticed that there was no clinical improvement and there was further dilatation of the ipsilateral pupil. He was taken for a repeat CT scan which showed a massive ipsilateral EDH over the frontotemporal region with significant mass effect (Figure 2). Emergency craniotomy and evacuation of the EDH was done following which the patient improved. He was discharged on the sixth postoperative day without any sequel.

Discussion

CSDH is one of the common neurosurgical pathology in the elderly. This case shows that although the former statement is true it can also occur in the young. The cause for the CSDH in the young without any clinical deterioration is unknown. Surgery for chronic subdural hematoma (CSDH) is one of the commonest and safest procedures done in any neurosurgical setup worldwide. Hulke in 1883 was the first to describe the successful neurosurgical evacuation of CSDH. The complications following evacuation include acute epidural hematoma (EDH) at the same or opposite site, intraparenchymal hematoma, cerebellar hematoma, acute subdural hematoma and infection. In a recent series of 365 cases of CSDH operated by single burr hole alone there was only one case of intracerebral hematoma confirming the low incidence of postoperative complications. Bleeding after surgery for chronic subdural hematoma far from the operative site are uncommon. Approximately 30 cases of chronic subdural hematomas complicated by intracerebral hematoma and only seven cases of epidural hematoma have been reported till December 2008. EDH after CSDH evacuation can occur in the same side as in this case or in opposite side. The incidence of this complication is rare that all of the cases reported in literature are limited to case reports. The possible cause of the EDH could be rapid evacuation of the CSDH with separation of the dura or bleeding from the burr hole edge. Although uncommon this complication must be kept in mind in those cases who do not improve clinically after CSDH evacuation or who have signs of deterioration. An urgent CT scan and surgical evacuation can help save life and prevent further morbidity.
References