Dural Metastases in Chronic Myeloid Leukemia Presenting as Subdural Hematoma

Kronik Myeloid Lösemide Subdural Hematom Olarak Ortaya Çıkan Dural Metastazlar

INTRODUCTION

Subdural hematoma (SDH) has been reported in 0.5–4% of all intracranial metastatic tumours (6). Chronic SDH has been reported in intracranial metastases from both solid and haematological malignancies. There are very few articles dealing with the pathogenesis and management of subdural hematomas in patients with intracranial metastases (1-6). Here we report recurrent SDH in a patient with chronic myeloid leukaemia (CML) following dural metastases.

CASE REPORT

A 56-year-old male patient presented to neurosurgery emergency with history of headache and forgetfulness for two weeks and sudden onset weakness of left side of the body and loss of consciousness for one day. He was a known patient of CML and was on regular treatment for the past three years. On examination he was hemodynamically stable and on neurological examination he was comatose with Glasgow coma scale (GCS) of nine. He also had papillary asymmetry and left hemiparesis. Computed tomography (CT) of brain revealed a large right fronto-temporo-parietal chronic SDH with midline shift. Coagulation parameters were normal. In view of his poor GCS a right parietal twist drill was put and evacuation of chronic SDH was done. Repeat CT scan showed significant evacuation of chronic SDH. The patient recovered well and was discharged. The patient was readmitted to casualty two weeks after discharge with history of headache and loss of consciousness. On examination, the patient was comatose with a GCS of five. The patient was intubated and CT brain was done that revealed fronto-temporo-parietal chronic SDH with midline shift. Coagulation profile was within normal limits. Immediate evacuation of SDH was done with a brain cannula kept through the previous twist drill site. The GCS of the patient improved to twelve. He underwent right frontal and parietal burr holes and evacuation of chronic SDH. Subdural membrane along with a part of duramater was sent for biopsy and chronic SDH fluid was sent for malignant cells. The fluid was negative for malignant cells but the biopsy revealed leukemic infiltration of subdural membrane (Figure 1A, B). He recovered well and was fully conscious without any deficit at the time of discharge. He was discharged and referred to oncologist for further management.
Subdural hematomas in patients with malignancy can be grouped into those occurring due to some predisposing factors and those occurring spontaneously. Predisposing factors could be previous head trauma, alcoholism or anticoagulation. Subdural hematomas occurring due to some predisposing factors were more commonly seen in solid tumours whereas spontaneous subdural hematomas were associated with haematological malignancies (5). The case reported here did not have any predisposing factor for subdural hematoma and was associated with CML in line with the reviewed literature. Among haematological malignancies SDH was more frequently associated with acute leukemias rather than chronic leukemias or lymphomas (1, 3). Here spontaneous SDH is reported in a case of chronic haematological malignancy that makes it unique. The exact pathogenesis of spontaneous SDH in haematological malignancies have been attributed to many factors including dural blood vessel occlusion by tumoral cells that may rupture within the subdural compartment (4), tumor necrosis, chemotherapy-induced thrombocytopenia or disseminated intravascular coagulation secondary to underlying malignancy (2). This case suggests that dural metastases from haematological malignancies should be considered as a possibility other than thrombocytopenia especially in patients of haematological malignancies with recurrent SDH.

REFERENCES

Figure 1: A) Dural (arrow) infiltration with leukemic cells (arrow head) (HE Lower magnification). B) Dural (arrow) infiltration by leukemic cells (arrow head) (HE high magnification).