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CEREBRAL VENOUS THROMBOSIS SECONDARY TO ACUTE MYELOID LEUKEMIA IN A CHRONIC SMOKER: A RARE CASE

General Medicine

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ABSTRACT

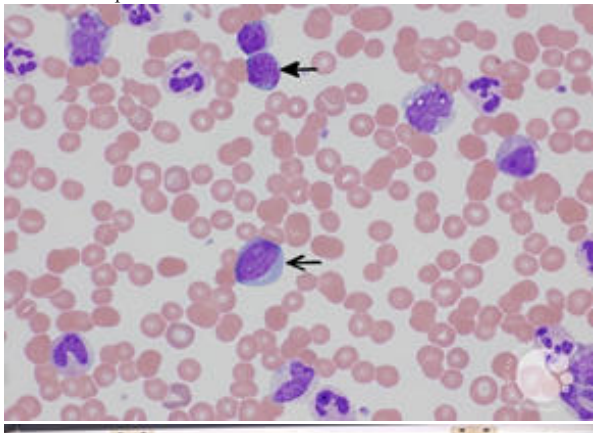
Cerebral venous thrombosis (CVT) is an uncommon but potentially fatal cerebrovascular disorder resulting from thrombosis of the cerebral veins and dural sinuses. It is frequently associated with prothrombotic conditions, infections, and systemic illnesses. Hematological malignancies such as acute myeloid leukemia (AML) are rare but important causes of acquired hypercoagulability leading to CVT. We report the case of a 64-year-old male, chronic smoker and known hypertensive, who presented with persistent headache of one-week duration. Neurological examination was initially unremarkable; however, magnetic resonance venography revealed features consistent with cerebral venous thrombosis. Laboratory evaluation demonstrated leukocytosis, and peripheral smear findings were suggestive of acute myeloid leukemia (AML-M4). The diagnosis was confirmed by bone marrow aspiration and immunophenotyping. The patient was managed with therapeutic anticoagulation for CVT and initiated on induction chemotherapy for AML, along with supportive care. Clinical improvement was observed with resolution of headache and stabilization of hematological parameters. This case underscores the importance of evaluating underlying hematological malignancies in elderly patients presenting with CVT and highlights the need for early diagnosis and multidisciplinary management to improve clinical outcomes.

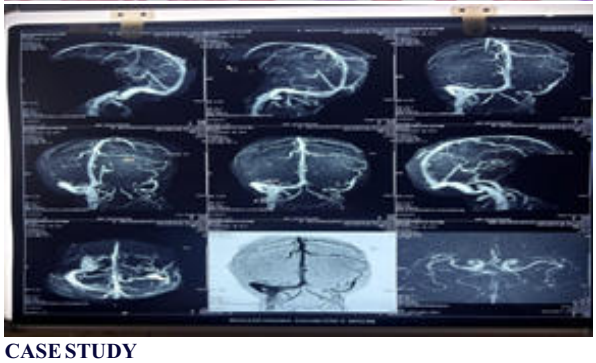
KEYWORDS

Cerebral venous thrombosis; Acute myeloid leukemia; AML-M4; Hypercoagulable state; Hematological malignancy; Magnetic resonance venography; Induction chemotherapy; Secondary thrombosis.

INTRODUCTION

Cerebral venous thrombosis (CVT) is a life-threatening condition characterized by thrombosis of cerebral veins and sinuses. It is commonly associated with prothrombotic states, infections, or malignancies. Acute myeloid leukemia (AML), though rare, can manifest as a prothrombotic state and contribute to CVT.





CASE STUDY

A 64-year-old male chronic smoker with known hypertension presented with complaints of persistent headache for one week. Initial clinical and neurological examinations were performed, which was normal followed by neuroimaging, which revealed features suggestive of cerebral venous thrombosis, his total count was elevated and peripheral smear showed Acute myeloid leukaemia (AML-M4). Bone marrow aspiration with immunophenotyping confirmed the diagnosis.

CONCLUSIONS

This case highlights the importance of considering underlying hematological malignancies such as AML in elderly patients presenting with CVT. Early diagnosis and a multidisciplinary approach are critical for favorable outcomes in such rare presentations.

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