

## Appearance of isolated thrombocytopenia in a patient of acute subdural hematoma

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**Abstract:** Thrombocytopenia in critically ill patients probably reflects the severity of the underlying illness and these patients have a higher mortality due to the severity of overall clinical status. In present article we report a case of acute subdural hematoma who developed progressive thrombocytopenia resulting in fatal outcome. A 75 year gentleman presented with history of sudden onset headache and lapsed into altered sensorium. There was history of trivial fall before he developed headache. The patient was deeply comatose with pupils bilateral 2 mm and reacting to light. Computerized tomography (CT) scan brain showed large right fronto-temporo-parietal acute subdural hematoma with mass effect and midline shift. Post-operatively he was kept on elective ventilation. On following days the patient continues to develop thrombocytopenia (Day-3 Platelet count 75,000, day-4 60,000, day-5 25,000). Thrombocytopenia is a common but a potentially life-threatening condition problem and has been considered to play a role in worsening the prognosis of critically ill patients in intensive care unit. Few studies statistically examine the strength of the association between risk factors and outcomes related to thrombocytopenia, additional research is recommended to identify putative molecular determinants.

**Key words:** Thrombocytopenia, acute subdural hematoma, trivial, head injury

### Introduction

Thrombocytopenia is a common but a potentially life-threatening condition problem and has been considered to play a role in worsening the prognosis of critically ill

patients in intensive care unit. (1, 2)

In present article we report a case of acute subdural hematoma who developed progressive thrombocytopenia resulting in fatal outcome.

### Case report

A 75 year gentleman presented with history of sudden onset headache and lapsed into altered sensorium. He was in altered sensorium since then. He was a known hypertensive on regular medication. There was no history of diabetes. There was history of trivial fall before he developed headache. On examination in the emergency department pulse rate was 100/minute, blood pressure was 150/100 mmHg, saturation was 82% on room air, chest examination bilateral crepitations. The patient was deeply comatose with pupils bilateral 2 mm and reacting reacting to light. Extraocular movements were full. Blood investigations including coagulation profile and platelet count (1,65,000/mm<sup>3</sup>) were normal. Computerized tomography (CT) scan brain showed large right fronto-temporo-parietal acute subdural hematoma with mass effect and midline shift. Post-operatively he was kept on elective ventilation. On following days the patient continues to develop thrombocytopenia (Day-3 Platelet count 75,000, day-4 60,000, day-5 25,000). The patient febrile (102°F) but there was no clinical evidence of bleeding. Coagulation profile was normal. Then antibiotics were changed and platelet count was marginally improved (Day-6 60,000, day-7 1,00,000). However there was no improvement in general condition. Peripheral smear was normal except mild thrombocytopenia. The patient did not improve and expired on 10th day post injury.

### Discussion

The mechanism of isolated thrombocytopenia in septicemia is largely unknown, (3) several mechanisms including

compensated disseminated intravascular coagulation, (4) increased platelet destruction, (5) or some impairment of platelet production (6) have been proposed as the possible causes. Septicemia, have been identified as the major independent risk factor for thrombocytopenia (2, 7-9) as thrombocytopenia can occur early in the course of septicemia even before the pathogen is cultured from the blood. 10 Platelet counts are measured just as frequently as hemoglobin, in the critical care unit, still platelet counts have not been well studied among critically ill patients. (3) Thrombocytopenia may occur in patients with septicemia without laboratory evidence of disturbed coagulation profile. (10-12) Validity of platelet count as a predictor of bleeding and correction of thrombocytopenia with platelet transfusions, is uncertain, (3) as major bleeding has not been defined consistently across studies. (13, 14) Just on the basis of laboratory findings alone, replacement therapy is not recommended and is required only in patients who are actively bleeding, who require an invasive procedure, or who are at risk for bleeding complications. (2, 15)

### Conclusion

Thrombocytopenia in critically ill patients probably reflects the severity of the underlying illness and these patients have a higher mortality due to the severity of overall clinical status. (3, 16-19) Few studies statistically examine the strength of the association between risk factors and outcomes related to thrombocytopenia, (3) additional research is recommended to identify putative molecular determinants and pathogenetic mechanisms causing isolated thrombocytopenia in critically ill patients because of septicemia. (20)

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