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Thrombotic Thrombocytopenic Purpura or Disseminated Intravascular Coagulation? Diagnostic Dilemma in the ICU

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Discussion

The clinical differentiation between DIC and TTP can be a diagnostic challenge. In our patient, the inconclusive DIC panel in addition to renal failure made TTP the most concerning alternative diagnosis. As mentioned previously, the literature shows that there is no conclusive diagnostic test for either condition, and diagnosis is based on clinical suspicion in conjunction with laboratory results.

Our patient had symptoms and laboratory values that were consistent with both TTP and DIC, and both diagnoses were considered for the majority of her hospital course (Figure 3). It was ultimately the spontaneous recovery of her platelet count that ruled out TTP as the etiology. The initial DIC panel on HD 4 was considered “inconclusive” because of the elevated fibrinogen and marginally elevated clotting times, but the literature shows that in the acute phase response there is shortening of activated partial thromboplastin time and increased fibrinogen concentrations2. Therefore a normal value for these measurements can not rule out DIC. As previously mentioned, the patient’s acute renal failure was another reason TTP was strongly considered. Literature shows, however, that acute renal failure occurs infrequently in TTP. Our patient’s renal failure was likely coincidental, secondary to an intraoperative insult. Critical care patients often have anemia and thrombocytopenia and the etiology is unlikely to be TTP even if MAHA is present1.

Our case demonstrates the difficulties in confirming a diagnosis with sensitive but nonspecific criteria. TTP and DIC share similar characteristics, but missing a diagnosis of TTP can prove fatal for the patient without treatment.

References

5. Sarode, R. Atypical presentations of thrombotic thrombocytopenic purpura: a review.

Abbreviations

DIC: Disseminated Intravascular Coagulation
TTP: Thrombotic Thrombocytopenic Purpura
MAHA: Microangiopathic Hemolytic Anemia
HIT: Heparin-Induced Thrombocytopenia and Thrombosis
References