Disseminated intravascular coagulation

Abnormal intravascular coagulation which consumes clotting factors and platelets, coupled with abnormal activation of the fibrinolytic system.

Head trauma is an independent risk factor for DIC, possibly because the brain is rich in thromboplastin which may be released into the systemic circulation with trauma.

Disseminated intravascular coagulation (DIC) is a condition in which blood clots form throughout the body, blocking small blood vessels.

Symptoms may include chest pain, shortness of breath, leg pain, problems speaking, or problems moving parts of the body.

As clotting factors and platelets are used up, bleeding may occur.

This may include blood in the urine, blood in the stool, or bleeding into the skin.

Complications may include organ failure.

Case reports

Kashyap et al. reported an extraordinarily unique case of refractory DIC after elective resection of multiple thoracic spinal meningiomas en plaque in a patient with neurofibromatosis type 1. A 49-year-old man underwent T1-3 laminoplasty and expansile duraplasty for resection of multiple en plaque meningiomas for thoracic myelopathy. Intraoperatively, the patient was found to be in a state of DIC that did not resolve postoperatively despite massive transfusions of blood products. He required subsequent returns to the operating room due to recurrent spinal epidural hematomas with resulting paraplegia. Ultimately, the wound was left open, and a wound vacuum-assisted closure (VAC) was placed to prevent further returns to the operating room. DIC persisted until the administration of recombinant factor VIIa. In this report, the authors review the mechanisms, subtypes, and approaches to treatment of DIC with a focus on the bleeding subtype. If this subtype is refractory to blood product administration (> 24 hours), recombinant factor VIIa is a safe and effective option. A wound VAC can be safely utilized with exposed dura if deemed necessary by the surgeon; however, the volume and characteristics of the output should be closely monitored. The use of unconventional surgical solutions may provide options to mitigate the morbidity associated with refractory DIC in spine surgery [1].

1)
Kashyap S, Podkovik S, Tashjian V. Disseminated intravascular coagulation in spine surgery: illustrative case review and the paradigms of management. J Neurosurg Spine. 2019 Oct 11:1-5. doi: 10.3171/2019.7.SPINE19756. [Epub ahead of print] PubMed PMID: 31604327.