



Disseminated Intravascular Coagulation

Barbara Holmes Gobel, RN, MS, AOCN®

- Which of the following is a risk factor for disseminated intravascular coagulation (DIC)?
 - Hypercalcemia
 - Tumor lysis syndrome
 - Infection with the varicella virus
 - Syndrome of inappropriate antidiuretic hormone
- The pathology that most often leads to the irreversible morbidity and mortality related to DIC is
 - Diffuse bleeding.
 - Diffuse thrombosis.
 - Thrombosis in the lungs.
 - Intracranial hemorrhage.
- What is the primary process that leads to thrombocytopenia in patients with DIC?
 - Excessive bleeding
 - Treatment with chemotherapy
 - Treatment with radiation therapy
 - Excessive activation of the coagulation system
- Five days after receiving chemotherapy for acute promyelocytic leukemia, a patient complains of “tenderness” over her right flank area with associated shortness of breath. The nurse notices a red indurated area over the right flank and suspects what process is occurring?
 - Chronic renal failure
 - Disseminated bleeding
 - Bleeding in the right kidney
 - Thrombosis or ischemia of the right kidney
- A patient with adenocarcinoma of the lung being treated with antibiotic therapy for a gram-negative bacterial infection complains of shortness of breath with associated hypoxia and develops blood in the urine. The nurse suspects that the patient has developed
 - DIC.
 - Hemothorax.
 - Pneumothorax.
 - Pulmonary embolus.
- What test(s) that show specific sensitivity would a nurse review initially in a patient experiencing signs and symptoms related to DIC?
 - Platelet count
 - Antithrombin III level and fibrinopeptide A level
 - Plasminogen level and plasmin alpha-2 antiplasmin complex level
 - D-dimer and fibrinogen degradation products/fibrinogen split products (FDP/FSP) assay
- What is the most important management strategy in treating patients for DIC?
 - Treat the clotting.
 - Treat the bleeding.
 - Provide supportive care only.
 - Treat the underlying etiology.
- A patient with prostate cancer is suspected of having DIC because of severe, prolonged postoperative bleeding. He currently is afebrile but has required treatment with oxygen and fluid replacement therapy and continues to bleed. What would be the next treatment strategy a nurse should anticipate and discuss with the patient?
 - Epoetin alfa
 - Heparin therapy
 - Antibiotic therapy
 - Supportive management only
- The postoperative patient in question 8 continues to bleed despite measures to control the DIC (i.e., fluids, oxygen, heparin therapy, and blood component replacement therapy). What classification of medications would a nurse anticipate that the patient might receive next?
 - Antibiotics
 - Vasopressors
 - Anticoagulants
 - Fibrinolytic inhibitors
- Prevention of further clotting in people suspected to be experiencing DIC includes which of the following measures?
 - Daily whirlpool therapy
 - Aggressive physical therapy
 - Application of support stockings to both legs
 - Sitting at the side of the bed for 30 minutes before getting out of bed

Answers

Question 1: The correct answer is choice c, infection with the varicella virus. DIC related to cancer always occurs secondary to a well-defined clinical condition. Infection and sepsis are the most common causes of acute DIC, which can be associated with a variety of viral, fungal, and bacterial infections. The most common malignancies associated with DIC are acute leukemias and mucin-producing adenocarcinomas. The other three choices are incorrect because they are not risk factors for DIC. Rather, they are metabolic oncologic emergencies in which coagulation studies are not affected.

Question 2: The correct answer is choice b, diffuse thrombosis. Diffuse thrombosis leads to ischemia, impairment of blood flow, and end-organ damage (Bick, 1996). Choice a, diffuse bleeding, is incorrect because the bleeding is a symptom of the underlying thrombosis. If the thrombotic process is brought under control, the bleeding often stops. Choice c, thrombosis in the lungs, is incorrect because it is a localized process that potentially is more treatable than diffuse thrombosis. Choice d, intracranial hemorrhage, is incorrect. Intracranial hemorrhage can be fatal, but diffuse thrombosis still is the primary cause of morbidity and mortality in patients with DIC.

Question 3: The correct answer is choice d, excessive activation of the coagulation system. Various conditions (e.g., sepsis, infection, cancer) can trigger activation of the coagulation system, producing multiple fibrin clots in the circulation. The clots trap platelets to become larger clots, which leads to the depletion of platelets in the circulation (Bick, Strauss, &

Barbara Holmes Gobel, RN, MS, AOCN®, is an oncology clinical nurse specialist at Gottlieb Memorial Hospital in Melrose Park, IL, and adjunct faculty in the College of Nursing at Rush University in Chicago, IL.

Key Words: disseminated intravascular coagulation, hemorrhagic disorders

Digital Object Identifier: 10.1188/03.CJON.339-340