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Cancer-associated thrombotic diathesis: one of your worst nightmares

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Topic(s):
Echocardiography: Masses and Sources of Emboli

Citation:
A 34-year-old male patient was diagnosed with undifferentiated sarcoma of the right thigh, with lung metastasis. He underwent primary lesion resection surgery and initiated chemotherapy with both doxorubicin and ifosfamide. Though primary tumor burden was substantially reduced, secondary lesions were found to be irresponsive to drug therapy, leading to regimen switching to both gemcitabine and docetaxel. Three months later, patient started complaining of atypical chest pain and palpitations. Electrocardiography revealed very frequent supraventricular ectopic complexes, while a transthoracic echocardiogram unveiled a pulmonary vein thrombus, which extended into the left atrium. This finding, which was further characterized by cardiovascular magnetic resonance imaging, prompted anticoagulation initiation, under the form of enoxaparin 1mg/kg bid. At this time, chemotherapeutic scheme was, again, swapped, and a cycle of both doxorubicin and olaratumab was introduced. A combined episode of inferolateral ST-segment elevation myocardial infarction and peripheral arterial embolism followed shortly thereafter. Emergent invasive coronary angiogram revealed no signs of both epicardial atherosclerosis and thrombus, whereas subsequent transthoracic echocardiography showed a massive left heart thrombus, extending into the aortic valve annulus. Anti-thrombotic approach involved increasing enoxaparin dosage to 1.5mg/kg bid but no fibrinolytic therapy. Despite a rather uneventful immediate clinical course, with no electric or hemodynamic instability and no limb-threatening ischemia, lamentably, patient died two weeks later, before thrombus definitive imaging reassessment. As no autopsy was performed, it is unclear whether a cardiovascular acute event or neoplasm inexorable progression is to blame as the primary cause of death.

Thrombosis is a common, costly and potentially fatal cancer complication. Patients receiving systemic chemotherapy for advanced diseased are at higher risk. Despite major management developments in the past fifteen years, evidence still supports traditional low-molecular-weight heparins as the first-line therapy and prognosis remains dismal.
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