

Bulky extranodal diffuse large B-cell lymphoma complicating with venous thromboembolisms and fatal spontaneous tumor lysis syndrome

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ABSTRACT

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Diffuse Large B-Cell Lymphoma (DLBCL) is the most common subtype of non-Hodgkin lymphoma, often presenting with nodal or extranodal involvement. Bulky disease and extranodal presentation are associated with increased risks of complications, particularly venous thromboembolism (VTE) and tumor lysis syndrome (TLS). While TLS typically occurs after cytotoxic therapy, spontaneous TLS can rarely develop, especially in patients with a high tumor burden and aggressive disease. A 55-year-old female was diagnosed with bulky extranodal DLBCL involving the right shoulder and extending to the scapular region. Diagnosis was confirmed through histopathological analysis with immunohistochemical staining and plain chest radiography. Due to the patient's condition, MSCT scanning was not performed. She presented with progressive dyspnea and right lower limb edema. Imaging revealed a large mass with destruction of the right scapula and an impending thrombus in the right lower extremity vein. Anticoagulation therapy (heparin and rivaroxaban) was initiated for VTE and the high risk of pulmonary embolism. Despite not receiving chemotherapy, the patient rapidly deteriorated, displaying laboratory abnormalities consistent with spontaneous TLS: hyperuricemia, hyperkalemia, hyperphosphatemia, hypocalcemia, and acute kidney injury. Despite intensive supportive care, she developed multiorgan failure and died within 24 hours. Bulky extranodal DLBCL carries a high risk of vascular complications due to tumor mass effect and hypercoagulability. High tumor burden predisposes to spontaneous TLS, a rare but life-threatening emergency. Anticoagulant use in TLS must be approached with caution, particularly in the context of renal dysfunction, due to risks of bleeding and drug accumulation. TLS-related metabolic disturbances can impair coagulation, increasing hemorrhagic risk, and may trigger disseminated intravascular coagulation (DIC). Early recognition, close metabolic monitoring, and prophylactic TLS management in high-risk patients are essential to improve outcomes and prevent fatal complications in aggressive lymphoma cases.

Keywords:

Bulky Extranodal
Diffuse Large B Cell
Lymphoma;
Venous
Thromboembolisms;
Spontaneous Tumor
Lysis Syndrome

ABSTRAK

Diffuse Large B-Cell Lymphoma (DLBCL) merupakan limfoma non-Hodgkin, yang sering kali muncul dengan keterlibatan kelenjar getah bening (nodal) maupun jaringan luar kelenjar (ekstranodal). Bulky extranodal DLBCL berhubungan dengan peningkatan risiko tromboemboli vena (VTE) dan

sindrom lisis tumor (TLS). Meskipun TLS umumnya terjadi setelah terapi sitotoksik, TLS spontan dapat muncul, khususnya pada pasien dengan beban tumor tinggi dan penyakit yang agresif. Seorang wanita 55 tahun dengan DLBCL bulky ekstranodal pada bahu kanan yang meluas ke skapula. Diagnosis ditegakkan melalui analisis histopatologi, imunohistokimia serta rontgen dada. Pemeriksaan MSCT tidak dilakukan karena kondisi klinis pasien yang tidak memungkinkan. Pasien datang dengan keluhan sesak nafas yang progresif dan edema tungkai bawah kanan. Pemeriksaan pencitraan menunjukkan massa besar dengan destruksi skapula kanan dan thrombus pada vena tungkai bawah kanan. Terapi antikoagulan (heparin dan rivaroksaban) diberikan untuk VTE dan risiko tinggi emboli paru. Meskipun belum menjalani kemoterapi, pasien mengalami perburukan klinis yang cepat, dengan hasil laboratorium menunjukkan hiperurisemia, hiperkalemia, hiperfosfatemia, hipokalsemia, dan gagal ginjal akut, konsisten dengan TLS spontan. Meskipun telah diberikan perawatan suportif intensif, pasien mengalami kegagalan multiorgan dan meninggal dalam 24 jam. DLBCL bulky ekstranodal memiliki risiko tinggi terhadap komplikasi vaskular akibat efek massa tumor dan kondisi hiperkoagulabilitas. Beban tumor yang tinggi meningkatkan kemungkinan TLS spontan, suatu kondisi gawat darurat onkologis yang jarang namun mengancam jiwa. Penggunaan antikoagulan pada kondisi TLS harus dilakukan dengan sangat hati-hati, terutama bila terdapat disfungsi ginjal, karena risiko perdarahan dan akumulasi obat. Gangguan metabolik akibat TLS dapat mengganggu sistem koagulasi, meningkatkan risiko perdarahan, serta dapat memicu koagulasi intravaskular diseminata (DIC). Deteksi dini, pemantauan metabolik yang ketat, dan manajemen profilaksis TLS pada pasien berisiko tinggi sangat penting untuk mencegah komplikasi fatal pada kasus limfoma agresif.