Peran Teknik Bone Marrow Sparing dalam Menurunkan Toksisitas Hematologi Akut Pada Pasien Kanker Serviks yang Menjalani Radiasi Definitif. = The role of Bone Marrow Sparing in Reducing Acute Hematologic Toxicity of Patients with Cervical Cancer Undergoing Definitive Radiation

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Abstrak

Tujuan : Penelitian ini bertujuan untuk mengetahui peran dari teknik bone marrow sparing intensity modulated radiotherapy (BMS-IMRT) dalam menurunkan toksisitas hematologi akut derajat 2 atau lebih. Metode : Dalam studi prospektif ini melibatkan 24 pasien kanker serviks stadium IB2-IVA yang dibagi secara random menjadi kelompok 3D konformal (3DCRT) atau kelompok BMS-IMRT. Toksisitas hematologi akut dinilai berdasarkan Common Terminology Criteria for Adverse Events (versi 5.0). Hasil : Tidak ditemukan perbedaan antar kedua kelompok terkait nilai awal hemoglobin, limfosit absolut, neutrofil absolut dan trombosit. Pada kelompok BMS-IMRT didapatkan kejadian anemia derajat 2 atau lebih yang lebih rendah secara signifikan (50% vs 91.7%, p = 0.025). Tidak didapatkan perbedaan signifikan terkait limfopenia dan trombositopenia. Neutropenia derajat 2 hanya didapatkan pada kelompok 3DCRT (33.3% vs 0%) namun perbedaan ini tidak signifikan secara statistik (p = 0.093). Kesimpulan: Teknik BMS-IMRT dapat menurunkaan kejadian anemia derajat 2 atau lebih pada pasien kanker serviks yang menjalani radiasi definitif.

.....Aims: This study was aimed to evaluate the impact of pelvic bone marrow sparing intensity modulated radiotherapy (BMS-IMRT) in reducing grade 2 or higher hematological toxicity for cervical cancer patients undergoing definitive radiotherapy. Methods: A total of 24 patients with stage IB2-IVA cervical cancer were prospectively enrolled and randomly allocated into the conformal radiotherapy (3DCRT) group or the BMS-IMRT group. Hematologic toxicity was defined by use of Common Terminology Criteria for Adverse Events (version 5.0). Results: No differences were seen in the baseline hemoglobin, absolute lymphocyte, absolute neutrofil, and platelet levels between the two groups. The incidence of grade 2 or higher anemia in the BMS-IMRT group was 50%, significantly lower than the 91.7% incidence in the 3DCRT group (P = 0.025) while the incidence of grade 2 or higher lymphopenia and thrombocytopenia did not differ significantly. The incidence of grade 2 or higher neutropenia was only found in the 3DCRT group (33.3%, vs 0%) but this difference did not reach statistical significance (p = 0.093). Conclusion: This study suggest that BMS-IMRT reduced the incidence of grade 2 or higher anemia in cervical cancer patients undergoing definitive radiation.