

Is OEPA/COPDAC chemotherapy and PET-CT based strategy for Hodgkin lymphoma appropriate in a developing country? Lessons learned from 143 patients

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Abstract

Background: ABVD regimen for Hodgkin lymphoma (HL), disfavoured in high-income countries, is popular in low-middle-income countries (LMIC). The feasibility/safety data for 'non-ABVD' protocols from LMIC is limited. Procedure: The retrospective study was conducted in a single center in India. Euronet-PHL-C1-based protocol was administered during 2010-19. A PET-CT was performed at diagnosis and following OEPA-course-2. Radiotherapy was administered for inadequate PET-response. Results: During the 10-year-period, 143 patients with HL were treated. The mean-age was 7.8 ± 2.5 years. Bulky-disease was observed in 82 (59%). Treatment-abandonment was recorded in 13 (9.1%). The median follow-up duration was 46.4 months. An inadequate PET-response was observed in 41/118 (34.7%). Radiotherapy was administered to 23/41 (56.1%). There was a protocol violation of replacing radiotherapy in 12 (29.3%) patients with 2-courses of COPDAC. Sixty-nine episodes of febrile-neutropenia were observed in 54 patients. TRM was observed in 7 (5.3%). The majority of episodes of febrile-neutropenia (61%) and TRM (86%) were following OEPA-course-1. The 4-year overall-survival (OS) and event-free survival (EFS) were $93.5 \pm 2.2\%$ and $86.2 \pm 3.4\%$, respectively. Nine (6.3%) patients relapsed. The survival compared favorably with 5-year-EFS (77.7%) of patients who received ABVD/COPP in the center in the past. Bulky-disease lacked association with inadequate PET-response ($p=0.800$) or relapse ($p=1.000$). Conclusions: OEPA/COPDAC regimen and response assessment by PET-CT permitted therapy reduction, including radiotherapy. The survival (4-year OS: $93.5 \pm 2.2\%$) was excellent, with a low relapse (6.3%). Febrile neutropenia and resultant TRM (5.3%) are concerning and occurred frequently following OEPA-course-1. The support system for managing febrile neutropenia should be optimized for administering OEPA in LMIC.

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