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# Combining brentuximab vedotin with dexamethasone, high-dose cytarabine and cisplatin as salvage treatment in relapsed or refractory Hodgkin lymphoma: the phase II HOVON/LLPC Transplant BRaVE study

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## ABSTRACT

Achieving a metabolic complete response (mCR) before high-dose chemotherapy (HDC) and autologous peripheral blood stem cell transplant (auto-PBSCT) predicts progression-free survival (PFS) in relapsed/refractory classical Hodgkin lymphoma (R/R cHL). We added brentuximab vedotin (BV) to DHAP (dexamethasone, high-dose cytarabine, cisplatin) to improve the mCR rate. In a phase I dose-escalation part of the study in 12 patients, we showed that BV-DHAP is feasible. This phase II study included 55 R/R cHL patients (23 primary refractory). Treatment consisted of three 21-day cycles of BV 1.8 mg/kg on day 1, and DHAP (dexamethasone 40 mg days 1-4, cisplatin 100 mg/m$^2$ day 1 and cytarabine 2x2 g/m$^2$ day 2). Patients with a metabolic partial response (mPR) or mCR proceeded to HDC/auto-PBSCT. Based on independent central [$^{18}$F]fluorodeoxyglucose (FDG) - positron emission tomography (PET) - computed tomography (CT) scan review, 42 of 52 evaluable patients (81% [95%CI: 67-90]) achieved an mCR before HDC/auto-PBSCT, five had an mPR and five had progressive disease (3 were not evaluable). After HDC/auto-PBSCT, four patients with an mPR converted to an mCR. Two-year PFS was 74% [95%CI: 63-86] and overall survival 95% [95%CI: 90-100]. Toxicity was manageable and mainly consisted of grade 3/4 hematologic toxicity, fever, nephrotoxicity, ototoxicity (grade 1/2), and transiently elevated liver enzymes during BV-DHAP. Eighteen patients developed new onset peripheral neuropathy (maximum grade 1/2); all recovered. In conclusion, BV-DHAP is a very effective salvage regimen in R/R cHL patients, but patients should be monitored closely for toxicity. (*clinicaltrials.gov identifier: NCT02280993*).

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