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PREVENTION

Washing out oral mucositis

Patients treated with high-dose chemotherapy as part of their conditioning regimen before undergoing autologous haematopoietic stem-cell transplanation (HSCT) often develop oral mucositis (OM)—a debilitating adverse effect associated with severe pain, heightened infection risk, and sometimes extended hospitalization. The current management of OM is palliative, and the only FDA-approved drug is palfermin. Following chemotherapy, oxidative stress can increase levels of proinflammatory cytokines; therefore, the use of antioxidant and anti-inflammatory agents might reduce OM. Preclinical data have shown a benefit of topical treatment with erythropoietin (EPO)-containing creams.

Now, Hosseinjani and colleagues have conducted the first randomized, placebo-controlled trial to measure the efficacy of an EPO mouthwash for the prevention of OM in 80 patients undergoing HSCT. Enrolled patients had non-Hodgkin lymphoma, Hodgkin disease, or multiple myeloma. The incidence of OM (all grades) was significantly lower in patients randomly assigned to receive EPO than in those in the placebo control group (27.5% versus 77.5%); moreover, the overall duration of OM was significantly shorter in the EPO group. A significant decrease in the incidence of grade 2–4 OM was also seen in the EPO group; no patients in this group experienced grade 4 OM, whereas four patients did in the control goup.

Importantly, all patients in the study had successful engraftment, with no effect of the EPO mouthwash on haematological recovery. Further large prospective trials are needed, but these promising findings indicate a possible new treatment for OM.

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Original article Hosseinjani, H. *et al*. The efficacy of erythropoietin mouthwash in prevention of oral mucositis in patients undergoing autologous hematopoietic SCT: a double-blind, randomized, placebo-controlled trial. *Hematol. Oncol.* doi:10.1002/hon.2250