Frequency of Oral Mucositis and Local Virus Reactivation in Herpes Simplex Virus Seropositive Children with Myelosuppressive Therapy

F Righini-Grunder, M Hurni, Rene Warschkow & J Rischewski

BACKGROUND

Background: Oral mucositis (OM) is a common chemo- and radiotherapy adverse effect in oncological pediatric patients. Herpes simplex virus (HSV) infection can cause a severe clinical course. We hypothesize, that HSV seropositivity is a risk factor for local HSV-1 reactivation and increased frequency of OM in patients with myelosuppressive therapies.

METHOD

Method: We evaluated the prevalence of seropositivity of HSV-1 between June 2011 and April 2014 in patients with potential oncological disease and correlated it to the frequency of OM and local viral reactivation in OM under myelosuppressive therapy. Results: The overall rate of HSV-seropositivity in our cohort was 22%. 48 patients underwent myelosuppressive therapy. Of these, 7 were HSV-1 IgG positive and 41 negative. All patients with OM under myelosuppressive therapy and positive local swab for viral HSV (I-PCR) were HSV-1 IgG positive before the start of therapy (100%). The absolute risk for OM in HSV-1 IgG positive patients was increased by 58.5% (95%CI: 20.0 - 72.2%) corresponding to a relative risk (RR) of 2.4 (95%CI: 1.7-3.5, P=0.009). The multivariable adjusted OR to suffer 2 or more OM episodes in HSV-1 IgG positivity was 8.8 (95%CI: 1.5-95.8, P=0.014). Discussion and Conclusion: In HSV-1 IgG positive patients half of the OM episode showed HSV reactivation, and the risk for multiple OM episodes was increased. These patients should be investigated for HSV-infection in every OM episode. Prophylactic and preemptive therapeutic measures should be discussed early, but prospective data on HSV prophylaxis and preemptive treatment is required.

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