

[FULL TEXT LINKS](#)

Clinical Trial *Arch Pediatr.* 2019 Jul;26(5):268-274. doi: 10.1016/j.arcped.2019.05.012.

Epub 2019 Jul 4.

Photobiomodulation with a combination of two wavelengths in the treatment of oral mucositis in children: The PEDIALASE feasibility study

E Noirrit-Esclassan ¹, M C Valera ², E Vignes ³, C Munzer ³, S Bonal ⁴, M Daries ⁴, F Vaysse ⁴,
C Puiseux ³, M P Castex ³, C Boulanger ³, M Pasquet ⁵

Affiliations

PMID: 31281038 DOI: [10.1016/j.arcped.2019.05.012](https://doi.org/10.1016/j.arcped.2019.05.012)

Abstract

Photobiomodulation is recommended in adults for the prevention of mucositis induced by cervicofacial irradiation or pre-transplant chemotherapy. The results of pediatric studies are promising but this support treatment is still underused. The objective was to conduct a feasibility study in the pediatric hematology-oncology unit at X Children's Hospital. Extra- and intraoral scans were performed a minimum of three times every 2 days for grade 2 or higher mucositis in children (median age, 8.6 years) using the Oncolase laser (Biophoton, Saint Alban, France), with a combination of two wavelengths (635 and 815nm). The effect of the laser on mucositis grade, pain, the child's tolerance, and the time dedicated to this care were also evaluated. The success of the procedure was 77% in 1 year, with the inclusion of 84% of the patients (n=22) and 146 laser treatment sessions (median of four per episode of mucositis). We observed excellent tolerance and pain relief with a gain of two points on the VAS and the HEDEN mucositis scale. This study shows that photobiomodulation that incorporates two application modes (intra- and extraoral) through the combination of two wavelengths is feasible when integrated into the care of a pediatric hematology-oncology department and is perfectly tolerated, even by young children. Along with oral hygiene and analgesic management, it alleviates pain associated with oral mucositis.

Keywords: Adolescents.; Children; Feasibility studies; Low-level light therapy; Oral mucositis; Photobiomodulation.

Copyright © 2019 French Society of Pediatrics. Published by Elsevier Masson SAS. All rights reserved.

Related information

[MedGen](#)

LinkOut – more resources

[Full Text Sources](#)

[Elsevier Science](#)