

## Use of antimicrobial photodynamic therapy associated with PerioKIN Hyaluronic 1% gel in oral lesions in a patient with STEVENS-JOHNSON Syndrome: Case Report

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# KIN INTERNATIONAL AWARDS

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## Abstract

Patient with Stevens-Johnson Syndrome, presenting lesions in the oral cavity and lip, with limited mouth opening, difficulty chewing and pain. Performed antimicrobial photodynamic therapy (aPDT) associated with Perio Kin Hyaluronic daily until healing of lesions and painful symptomatology. Performed for a period of 10 days.

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## Introduction

Stevens-Johnson syndrome is a rare acute process with a mortality rate of 20%. Stevens-Johnson syndrome is a reactive dermatosis consisting of an erythema multiforme with the presence of vesicles and/or blisters on the mucosa (mainly oral). Its most severe presentation is toxic epidermal necrolysis. The most frequent cause is hypersensitivity to multiple drugs, followed by infections, connective tissue diseases, and neoplasms. Photobiomodulation therapy (PBT) with laser or LED has been indicated to accelerate the wound healing process, modulate the inflammatory process and promote analgesia; being considered a safe and effective therapy for the prevention and treatment of several oral alterations. However, when there is a need for an antimicrobial therapy, the light source should be associated with a photosensitizer and oxygen, so that there is the production of reactive oxygen species and death of microorganisms. This therapy is called antimicrobial photodynamic therapy (aPDT) and has been introduced in a very promising way in the hospital dentistry environment. The need for hydration of the lesions and decreasing the risk of local infection, perio Kin Hyaluronic was associated.

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## Anamnesis

Patient C.M.N.S, 16 years old, transferred from another service to Santa Marcelina Hospital for suspected STEVENS-JOHNSON. His mother reports that he started presenting diffuse and intense abdominal pain, with the hypothesis of inflammatory bowel disease. The proposed treatment was SULFASSALAZINE 2 pills 8/8 hours, continuous use, prednisolone for 7 days, and weaning from the medication. After 5 days of medication, the patient evolves with fever (38°C), associated with throat itching, hawking, sensation of secretion in the oropharynx, burning sensation and eye tearing. Physical examination at admission showed edema of the face, diffuse hyperemia, bullous lesions all over the face, yellowish crusts on nasal wings, edematous and flaking lips with yellowish secretion. Oropharyngeal examination limited mouth opening due to pain 9/10 (Visual Analogue Scale of Pain - VAS), lesions in the gingival mucosa, palate and tongue. Kept in the Intensive Care Unit for intensive and hemodynamic support. Under use of methylprednisolone 60mg/day.

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## Treatment plan

After evaluation by the Oral and Maxillofacial Surgery Team, we chose to perform antimicrobial photodynamic therapy (aPDT), using the association of Methylene Blue diluted at 0.01%, with Red Laser 660nm, equipment used Therapy EC, DMC, Power 100mW, 6 J per point. Oral hygiene orientation and local hydration with PerioKIN Hyaluronic 1% gel.

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## Carrying out the treatment

Given this picture, we decided to perform antimicrobial photodynamic therapy (aPDT), using the association of Methylene Blue diluted at 0.01%, with Red Laser 660nm, Therapy EC equipment used, DMC, Power 100mW, 6 J per point.

The aPDT sessions were performed once a day for 10 days associated with the use of PerioKIN Hyaluronic 1% gel 2 x a day, after oral hygiene. A progressive improvement was observed with the treatment, reducing local symptoms and favoring the return of oral feeding, besides the improvement in oral hygiene. At the end of 10 days, the patient reported symptomatology in the oral cavity measured in 3/10 (VAS) and performed a full mouth opening.

To aid in the complete healing of the lesions, 3 sessions of spot photobiomodulation (PBM) 0.5 J were performed. The patient made a full recovery of his health condition and injuries and was discharged from the hospital.

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(A e B) Avaliação inicial. (C e D) Após 5<sup>o</sup> dia de acompanhamento e terapia fotodinâmica antimicrobiana + hidratação com PerioKIN Hyaluronic 1% gel (E-H) Ao final das 10 sessões de aPDT e PerioKIN Hyaluronic 1% paciente já apresenta melhora importante das lesões, diminuição da sintomatologia dolorosa e abertura bucal completa.



Initial assessment.



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After day 5 of follow-up and antimicrobial photodynamic therapy and PerioKIN Hyaluronic 1% Gel,



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At the end of 10 aPDT sessions and the use of PerioKIN Hyaluronic 1% G, the patient already has a significant improvement of the lesions, a decrease in pain symptoms, and a complete mouth opening.

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## Follow up

Patient returns 01 week after hospital discharge to the outpatient clinic, with no alterations in the oral mucosa, presenting as integrated, hydrated and without painful symptoms.

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## Discussion

As in the case described, several studies show improvement in the treatment of oral lesions with antimicrobial photodynamic therapy (aPDT). The use of PerioKIN Hyaluronic 1% Gel, contributes to better tissue healing and hydration, with good acceptance by the patient, without adverse reactions.

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## Conclusion

The use of PerioKIN Hyaluronic 1% Gel, contributes to better tissue healing and hydration, with good acceptance by the patient, without adverse reactions.

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