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Advances in the clinical application of photodynamic action for pharyngotonsillitis treatment (Conference Presentation)

Kate C. Blanco; Jennifer Soares; Natalia Inada; Vanderlei Bagnato

Author Affiliations -

Kate C. Blanco,[1] Jennifer Soares,[1] Natalia Inada,[1] Vanderlei Bagnato[1]

[1]Univ. de São Paulo (Brazil)

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Abstract

Antimicrobial Photodynamic Therapy (APDT) is being increasingly used for treatment of acute infections. The cause of upper respiratory tract infections represent a large part of the diseases caused by drug-resistant microorganisms. Acute pharyngotonsillitis caused by bacteria represent many cases that are admitted to hospital emergency dialy. Antibiotics are the first line treatment for bacterial pharyngotonsillitis. However, drug failure may occur by antibiotic therapy, which can cause recurrent pharyngonsilitis. Pharyngotonsillitis treatment has been studied by CEPOF for the last five years. The studies were focused on the following tests: determination of a formulation used in tonsils; development of lighting device for tonsils; incorporation of the photosensitizer by the main pathogenic microorganisms, microbial behavior in successive PDT sessions; study of microbial virulence of surviving bacteria after PDT sessions; development of clinical study phase I and II. The results have shown that under specified the PDT can be used for the treatment of pharyngotonsillitis. It was possible to observe the increase of incorporation of photosensitizer depending of formulation composition; the microbial resistance behavior in relation to successive PDT sessions; the safety of the technique in clinical phase I study, and clinical results, not yet completed, in phase II showed the PDT efficient against different types of pathogenic microorganisms in adults.

Conference Presentation

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