Development of drugs for local treatment of oral conditions

June 23 2016

On June 24, 2016, at the 94th General Session & Exhibition of the International Association for Dental Research, researcher W. Peter Holbrook, University of Iceland, will present a study titled "Development of Drugs for Local Treatment of Oral Conditions." The IADR General Session is being held in conjunction with the 3rd Meeting of the IADR Asia Pacific Region and the 35th Annual Meeting of the IADR Korean Division.

Several medications commonly prescribed for oral mucosal administration are actually intended for transdermal application. Many conditions affecting the oral mucosa require frequent or long-term treatments and some treatments are systemically applied. Clinical resistance and patient intolerance of such treatments may develop. There is thus a constant need to address these problems through the development of less side-effect prone drugs.

Researchers at the University of Iceland have developed several new formulations for topical treatments of oral mucosal conditions and carried out appropriate clinical trials. The main area of this research has been the inhibition of matrix metallo-proteinase activity using topical doxycycline, initially in order to treat aphthous ulceration. The anti-microbial compound monocaprin was also tested for activity against herpes virus and, in combination with doxycycline, was developed in an active formulation for treating cold sores (canker sores). Monocaprin also has anti-candidal activity that has been evaluated among geriatric patients with denture stomatitis.

Topical application of doxycycline was very effective in promoting healing of mucosal lesions. Monocaprin reduced counts of Candida rapidly and significantly. The results of these clinical studies have been very promising when compared to the conventional treatments available in Iceland and abroad. Stability of the active components has recently been effectively addressed and current research is aimed at different types of drug delivery systems in order to optimize drug delivery to the local mucosal site. This includes drug release time and muco-adhesive capacity of the formulation, thereby attempting to develop more disease-specific drug delivery systems.

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More information: This is a summary of abstract #0911 titled "Development of Drugs for Local Treatment of Oral Conditions," to be presented by W. Peter Holbrook on Friday, June 24, 2016, 8 a.m. - 8:30 a.m. at the COEX Convention and Exhibition Center, in room 308A, as part of the keynote address titled "Development of Drugs for Local Treatment of Oral Conditions."

Provided by International & American Associations for Dental Research