THE STUDY IN VITRO OF THE EFFECTS OF THE INHALANT CORTICOSTEROIDS ON ORAL AND LARYNGEAL MUCOSA

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ABSTRACT

BACKGROUND – the pharmacology activity of corticosteroids ,is due to the formation in the blood of the complex Corticosteroid- Protein Glycosylated ,that ,in this form, after the binding to the cytoplasmic receptor ,penetrates in the target cells. This interaction process, also happens ,with salivary proteins The aim of this study is, to study this process ,that precipitate the salivary proteins ,and with them ,the salivary secreted mucin.
MATERIALS METHODS –In two samples of whole saliva provided by volunteers ,are added different concentrations of three corticosteroids ,Beclometasone ,Budesonide, Fluticasone. The samples are centrifuged ,and in surnatant, dosed ,the amounts of total salivary proteins and mucins .The results are statistically analyzed with Mann Whitney U Test ,Test T, Pearson Correlation Coefficient
RESULTS –DISCUSSION – With all dosage ,the difference of the proteins and mucins precipitated by the Budesonide ,and Beclometasone vs Fluticasone ,are statistically different .,$p \leq 0.05$ .For all three corticosteroids, there is a saturation value ,with a good correlation between corticosteroids's dosage and the amount of the protein- mucins precipitation ,(Pearson coefficient of 0.91).The little difference in the precipitation of the mucins,and the proteins ,p=0.0334, obtained with the Budesonide versus Beclometasone ,can find an explanation, for the presence in the first , of two hydroxyl groups ,(one in beclometasone).The difference of beclometasone and Budesonide ,versus Fluticasone ,is due assuming that the parameters , that stabilize the (CCP), type hydrogen bonds and Van der Waals forces, are more influenced by solubility in water, there is nothing for the fluticasone, rather than by the chemical conformation of drugs

Biography

Alexandre Henri Didier is a post graduated student in Hospital Pharmacy since 2015.

Actually he has a scholarship sponsored by his hospital and he is doing his job into the Nutrition service (Enteral and Parenteral).

He has published 4 papers in reputed journals and he has taken part to more than 20 conferences during 2016-2017.

He has also a lot of masters in science.

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