Factors contributing to adverse soft tissue reactions due to the use of tartar control toothpastes: report of a case and literature review.

DeLattre VF¹.

Author information

Abstract
Tetrasodium and/or tetrapotassium pyrophosphate (Ppi) is the anticalculus component of most tartar control dentifrices on the market today. While pyrophosphates alone are not responsible for hypersensitivity reactions, several modifications which may lead to adverse oral manifestations may occur when pyrophosphates are added to a dentifrice. First, tetrasodium pyrophosphate in a dentifrice forms a slightly alkaline solution upon oral use which could irritate oral membranes. Second, increased concentrations of flavoring agents, known to be sensitizers, are needed to mask the strong bitter taste of pyrophosphates. Third, increased concentrations of detergents, capable of producing hypersensitivity reactions, are necessary to allow the pyrophosphates to become soluble in the dentifrice. Fourth, a pre-existing condition of reduced salivary flow may augment hypersensitivity to tartar control toothpastes. While pyrophosphates have been approved as additives in dentifrices, these compounds along with the increased concentrations of flavorings and detergents and their higher intraoral alkalinity are strongly implicated as the causative factor in certain hypersensitivity reactions.

PMID: 10440643 [PubMed - indexed for MEDLINE]