Drug-related caries and dental erosion *

Caries and dental erosions usually arise due to poor dietary habits and inadequate oral hygiene, such as insufficiently brushing the teeth. In rare cases, the use of certain drugs can contribute to caries and dental erosion. This may be caused by excipients, such as sugar in oral solutions or chewable tablets, or eroding powder particles used in powder inhalers. In addition, medicines can contribute to caries indirectly by reducing saliva secretion, as saliva protects the teeth by its antibacterial and buffering effects, and it also cleanses the oral cavity. Pharmacologically, this could include a large number of agents.

The relation between medication use and caries and erosions has received little attention in the scientific literature. What is known about it derives from studies producing low levels of evidence, such as a few cohort studies, cross-sectional studies and, mostly, reports to adverse effects reporting centres or anecdotal reports. These concern oral solutions containing sugar and chewable tablets in general, asthma medications, antidepressives and antipsychotics. Such studies cannot prove causal relationships, so there is a need for further research into the relation between drugs and the development of caries and dental erosion.

Doctors and dentists need to be aware of the role of drugs when a patient presents with caries or dental erosions, especially if there is no other satisfactory explanation and the patient has been using a drug frequently and over a long period of time. Patients using a drug that can cause caries or erosions should be advised to visit a dentist regularly. In addition they should be given advice on diet, oral hygiene and measures relating to the use of the medication, such as rinsing the oral cavity with water after having taken a sugary oral solution. Dentists should also report suspected side-effects (to adverse effects reporting centres) as fully as possible, that is, providing information on possible temporal relations, co-medication and other possible causes.

References*

35. Lupi-Pégurier L, Muller-Bolla M, Fontas E, Ortonne JP. Reduced salivary flow induced by systemic isotretinoin may lead to dental decay. A prospective clinical study. Dermatology 2007; 214: 221-226.

*The literature refers to the Dutch text*