Letter to the Editor

A Useful Source for the Drug-Dry Mouth Relationship

Dear Dr. Alvares:

I want to bring to the attention of the JDE readership a drug-dry mouth website that I believe can be a valuable resource for our academicians and general practitioners engaged in diagnosis and treatment planning. This free, readily available website is at www.drymouth.info. This site is a comprehensive source that provides authoritative information about oral dryness and, especially, its relationship to the intake of drugs. Separate portals on the site are dedicated to consumers (patients) and to practitioners.

Oral dryness is a symptom that affects from 20 to about 40 percent of the adult population. It is more commonly observed in women than men (F/M ratio = 9:1), and its prevalence increases steadily with age. Moreover, it is rarely a solitary symptom. Frequently accompanying it is a wide variety of oral, as well as systemic, desiccatory conditions. Basic activities such as speech, taste, mastication, smell, sight, and even sex—functions that provide us with so much pleasure—may be seriously affected. Xerostomia is primarily caused by systemic diseases and by the intake of xerogenic drugs. More than 1800 drugs have the ability to induce xerostomia.

The consumer (patient) portal of the website consists of sections addressing the following questions: 1) What is dry mouth? 2) What causes dry mouth? 3) What happens when your mouth feels dry? and 4) What are some treatments for dry mouth? It also includes a search engine that allows consumers to examine the register of drugs capable of inducing oral dryness. The portal directed to the practitioner presents detailed information about 1) the complexities of the drug-dry mouth relationship; 2) data on the symptoms, signs, and causes of xerostomia; 3) information about the relationship among drugs, dry mouth, and salivary flow; and 4) selected treatment modalities, as well as the drug search engine.

The search for drugs may be conducted according to their trade or generic name, alphabetically or by drug class. A search for Prozac, for example, reveals its chemical formulation, dosage forms, classification, and capacity to induce dryness (indicated by cactus symbols) and whether it also has the ability to cause dry eyes (indicated by an eye symbol).

This example is as follows:

**Prozac**

*This brand name consists of:*
Fluoxetine HCl, Tabs 10mg, Caps 10, 20, and 40mg; Weekly, Caps DR 90mg; Oral Sol 20mg/5mL

**Classification:**
PSYCHOTROPIC AGENT->
ANTIDEPRESSANT->SELECTIVE
erotonin REUPTAKE INHIBITOR

**Xerostomia (Dry Mouth) Incidence**
Symbol: 3 cacti (More then 10%)

Symbol: eye (This drug may result in dry eyes.)

An alphabetical search for drugs reveals all the xerogenic medications listed under the chosen letter. Generic or chemical names are shown in bold type and trade names in regular type.

There are more than sixty classes and a hundred subclasses of drugs that have the potential to cause dry mouth. A search, for example, for antihypertensive drugs would show the following:

**ANTIHYPERTENSIVES**
Angiotensin converting enzyme inhibitors
Angiotensin II receptor antagonists
Anti Adrenergics—centrally acting
Anti Adrenergics—peripherally acting
Beta adrenergic blocking agents
Calcium channel blockers
Other

Selecting any of the subcategories (e.g., calcium channel blockers) reveals an alphabetical list of the trade and generic names of all drugs in that
subclass. Selecting any of these medications provides data regarding their dosage, xerogenic potential, ability to induce dry eyes, and so on.

Special consideration is given to cold and cough preparations that may induce dryness. In addition to showing the subclasses and the data indicated above, information is also provided about first- and second-generation antihistaminic drugs that cause xerostomia and about the various analgesics, anticholinergics, antitussives, decongestants, and expectorants that may cause dryness.

The website authenticates the massive number of drugs that can cause oral dryness. Although information regarding drugs and dry mouth is not precise, the flexible search engine makes it particularly easy for patients and practitioners to identify those medications likely to be xerogenic. This is important because the incidence of dry mouth increases in relation to the number of drugs taken. Identification of these drugs also enhances the success of treatments designed to counter the effect of oral desiccation. It would be most useful if representatives of pharmaceutical companies who view this site would recognize the importance of the drug-dry mouth problem and begin to design medications in which the xerogenic side effects are absent or diminished.

The website was initiated and developed by Mr. Niels Hoegh-Gulderpol of the Wm. Wrigley Jr. Co. The scientific data at the site were gathered and edited by Drs. Leo M. Sreebny and Steven S. Schwartz of the State University of New York at Stony Brook. The site is based, in part, on previous guides published by these authors on “Drugs and Dry Mouth” (Gerodontology. 1986, 1997). Sources include the U.S. Food and Drug Administration as well as medical and dental drug reference guides. The current online edition is in its third year and is revised annually. The Wm. Wrigley Jr. Company continues to support and operate this website; its current administrator is Dr. Michael Dodds.

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