

SALIVA PROBLEMS IN ALS PATIENTS

More in particular, in this article we will be addressing the problem with excessive saliva production or hypersalivation, also called drooling. Usually the real problem is not excessive saliva production, but rather decreased clearance of saliva by impaired swallowing reflexes, or impaired oral or tongue motor skills. In ALS that is the true for 30 % of the cases.

Saliva problems have a large impact on the social life of ALS patients because it often does not look esthetically or because it is smelly. On top of that the clothes need to be washed more often, which can become an additional practical problem. That way excessive saliva production becomes a social and an emotional handicap.

In normal circumstances people produce on average 2 liters of saliva per day and in order to manage that, they need to swallow about 600 times a day. Saliva is mainly produced while chewing. However, even "at rest" there is some saliva production. In normal circumstances the swallowing happens automatically. However, when there is excessive saliva, the normal swallowing frequency is not enough, and then the excessive saliva left over in the mouth will find its way out usually along the corners of the mouth. Sometimes the saliva also runs through the open mouth when the mouth and lip muscles are too weak and the lips cannot be kept closed.

The central question would be: "How can saliva production be limited?" There a few kinds of treatment that can be used.

1. so-called anticholinergics

Oral intake of certain anticholinergics, medicines with an atropine-like effect, can be one way to treat the excessive saliva production. Atropine has a number of specific side-effects, a dry mouth is in this case a desired effect. Adverse reactions are mainly constipation and increased eye pressure, glaucoma in elderly. Constipation can be prevented by using laxatives.

2. scopolamine patches

Scopolamine is a natural product that can be used in small amounts, as powder in doses that can be in-

corporated in patches. It is used in this context for its drying properties - but it has been applied for all kinds of things, even witchcraft and criminality. Scopolamine patches were even withdrawn from the market in 1998 for a year. When used for a long time the side-effects can become very serious, it can for example lead to urinary problems.

3. Botuline A toxin ("Botox") injections

Botuline A toxin, a protein that works on the nerve cells, paralyzes the nerves that control the muscles, so the muscles become weak. The toxin is in fact a poison that causes botulism.

When small amounts are injected in the area of the saliva glands, it can produce some positive effects. In this case the Botuline A toxin injection paralyzes the nerves controlling the saliva glands. The effect on saliva production should be noticeable after 1 week and would last for 3 months. The injection needs to be done very precisely as the glands are embedded in a complex anatomy. These days often times ultrasound is used during the injections. Some possible side-effects can be pain, swollen saliva glands and swallowing issues. The latter confronts ALS patients with a dilemma: might the cure be worse than the initial problem? We would like to point out that there are several studies published and commented, and therefore several different interpretations are going around. Our warning could be a worst case scenario illustration.

4. In serious cases surgery or radiation can be applied, possibly leading to side-effects like scars or the opposite effect, more in particular, too little saliva production. That creates of course digestive and swallowing difficulties. Always consult your doctor before considering these kinds of treatment.

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