

Proceeding Paper

Xerostomia and Medication in an Elderly Portuguese Population [†]

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Abstract: Xerostomia (dry mouth perception) is a condition that affects mastication, swallowing and speech and increases with age or can be the result of medication or some systemic diseases. The purpose of this exploratory study was to evaluate the prevalence of xerostomia in a local elderly population and its relationship with medication. It was verified that most of the participants have xerostomia, and from these, the majority take medication. Additionally, the prevalence of xerostomia varies with the type of medication taken. The presence of xerostomia was found to be significantly related to the number of medications taken.

Keywords: xerostomia; geriatrics; medication



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1. Introduction

The elderly population has been growing and is expected to continue to increase in the future [1]. Dry mouth perception (xerostomia) increases with age, affecting nearly 30% of the elderly, and it is most common in medicated patients or can be related to systemic diseases such as diabetes or Sjögren syndrome [2,3]. Studies identify many medications with xerogenic potential such as antidepressants, anticonvulsants, anticoagulants, antihypertensives, antihistamines or hypoglycemic medication [3,4]. The purpose of this study was to evaluate the prevalence of xerostomia in an elderly local population and determine the influence of medication on dry mouth perception.

2. Materials and Methods

This study, approved by a state-recognized ethical committee, included 80 elderly patients who attended a university dental clinic, in the Lisbon region urban area (Portugal), over a 3-month period. Inclusion criteria were: age 65+ years, being non-institutionalized and having signed an informed consent. Participants were distributed into four groups according to their age (years): 65–70, 71–75, 76–80 and 81+. Information was gathered through a questionnaire about xerostomia symptoms (yes/no) and medication taken. Medication was classified by pharmacological group (antihypertensives, antidiabetics, antidepressants, anticonvulsants, antihistamines, cytotoxic, anticoagulants and other medications), and the number of medications taken (1, 2 or 3+) was recorded. Data were analyzed through descriptive and inferential statistical methodologies. A significance level of 5% ($p = 0.05$) was considered.

3. Results and Discussion

3.1. Presence of Xerostomia in Each Age Group

From all the participants of this study, the majority (52.5%) have xerostomia symptoms. The age group 65–70 years revealed the highest prevalence of xerostomia (65.5%), followed by the 81+ years age group, with a xerostomia prevalence of 53.8%.

3.2. Presence of Xerostomia and Medication

From the participants with xerostomia symptoms, 90.5% take medication. In each pharmacological group, more than half of the medicated participants have xerostomia; however, a significant difference between different pharmacological groups was not identified ($p > 0.05$).

3.3. Presence of Xerostomia and Number of Medications Taken

The presence of xerostomia increased with the number of medications taken: 45.2% of the participants who have xerostomia take three or more medications, and only 9.5% who have xerostomia do not take any medication. The number of medications taken by participants with xerostomia was significantly higher when compared with patients without xerostomia ($p = 0.025$).

Several studies linked xerostomia with medication intake and showed that elderly patients that do not ingest any medication had a higher salivary flow rate than medicated patients [2]. Xerostomia-inducing medication interferes in the production of saliva or in the pathways responsible for salivary secretions, by direct or indirect action on the salivary glands [5,6]. An increase in medication leads to a reduction in salivary flow, affecting dry mouth perception, and the probability of having this symptom increases with additional medications, which demonstrates the synergistic effects of xerostomia-inducing medication in the elderly [2,5,6].

In conclusion, the majority of the participants in all age groups have xerostomia symptoms, and most of them take medication. Furthermore, these symptoms increased with the number of medications taken, which emphasizes the importance of oral preventive measures towards a better quality of life in the elderly.

Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the Ethics Committee of Instituto Universitário Egas Moniz (protocol code 896, approved on 30 July 2020).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to the research is still under development.

Conflicts of Interest: The authors declare no conflict of interest.

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