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The relationship between salivary flow rate, oral health, and malnutrition in the elderly: a cross-sectional study "about"

Yaşlılarda tükürük akış hızı, ağız sağlığı ve malnütrisyon arasındaki ilişki; kesitsel bir çalışma "hakkında"

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Dear Editor,

I am writing regarding the article titled " The relationship between salivary flow rate, oral health, and malnutrition in the elderly: a cross-sectional study" published in the Pamukkale Medical Journal [1]. As a geriatrician, I extend my thanks to the authors for their valuable contribution to this significant area of geriatrics. Malnutrition, with a prevalence of 19% among community-dwelling older adults in Türkiye, is a prevalent and critical geriatric syndrome due to its adverse outcomes on older adults [2]. Understanding all of its triggers is vital for the elimination and prevention of its development. Sometimes, inquiries about the oral health, taste perception, or satisfaction with eating of older individuals in outpatient clinics may be overlooked or neglected, despite these factors being major contributors to decreased oral intake and malnutrition. This study is important for highlighting this issue and also for reflecting Türkiye's data.

The study revealed no significant relationship between salivary flow rate and dental/oral health and malnutrition. However, a significantly negative correlation was observed between BMI and salivary flow rate among older adults (r=-0.291, p=0.021). In the methods section, it was mentioned that individuals with diseases that could affect salivary flow rate (such as Sjögren's syndrome, rheumatoid arthritis, systemic lupus erythematosus, Parkinson's disease, diabetes mellitus, and other endocrine diseases, Crohn's disease, inflammatory bowel disease, periodontitis, and mucositis), as well as individuals who received radiotherapy to the head and neck region, and those who were fasting, were not included in the study. However, another important consideration, medications, especially those with anticholinergic effects, was not addressed in this study. Medications that have anticholinergic effects inhibit salivary function either directly by blocking acetylcholine binding to muscarinic receptors in the salivary glands or indirectly through effects in the central nervous system, resulting in decreased salivary flow and dry mouth [3].

Anticholinergic drug use is a significant concern among older adults, with a notably high prevalence. Studies indicate that approximately 57% of individuals aged 75 and above use at least one anticholinergic drug [4]. Many drugs in these categories have anticholinergic effects, such as diuretics, antihypertensive agents, antidepressants, antipsychotics, antihistamines, anxiolytics, muscle relaxants, anticonvulsants, antiparkinsonian drugs, anti-incontinence agents, and medications for insomnia. The list of such medications is extensive, with even nonsteroidal anti-inflammatory drugs like ibuprofen and naproxen also included [5].

According to the "drug burden index," which measures exposure to drugs with anticholinergic and sedative effects, medications are categorized into groups based on their anticholinergic activities. Some antidepressants, medications used to treat urinary incontinence, and those used for insomnia have the highest anticholinergic side effects, and they are relatively common among older adults [6]. Therefore, although the individuals selected for this study were functionally independent and had relatively intact cognition, it is possible that the participants may have been using anticholinergic drugs for common reasons such as depression, urinary incontinence, insomnia or pain, which are prevalent in the older adults.

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On the other hand, the study indicates that individuals with obesity tend to have lower salivary flow rates. Obesity is frequently associated with comorbid conditions such as diabetes, cardiovascular disease, metabolic syndrome, depression, anxiety, urinary incontinence, and certain types of pain, which are more prevalent in this population [7-9]. Some anticholinergic medications may be used to treat these conditions, potentially resulting in higher anticholinergic usage among obese individuals. Therefore, this situation could also contribute to a decrease in salivary flow rate among obese individuals.

In conclusion, it would have been preferable to record the medications used by the patients included in the study and to exclude those who use medications with anticholinergic side effects. Alternatively, patients could have been grouped based on whether they used medications with high anticholinergic effects or not, allowing for a comparison of salivary flow rates between these two groups. It is important to exclude potential confounders in such studies because they could undermine the level of evidence obtained. These suggestions are made with the aim of guiding future studies that will explore these relationships further.

Geriatric medicine relies on teamwork, and dietitians and dentists play crucial roles as important colleagues of geriatricians. I am glad to see that they are already engaged and interested in addressing specific aspects of geriatric care, such as malnutrition and dental/oral health, respectively. The authors have conducted a study that involved considerable effort. I would like to express my appreciation for their efforts in conducting the first study to elucidate this issue in community-dwelling older adults in Türkiye, and I look forward to seeing an increase in new studies on this topic.

Thank you for the opportunity to provide feedback.

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