

<http://dx.doi.org/10.35630/2199-885X/2020/10/2.22>

DENTAL STATUS OF GERIARTIC PATIENTS WITH PRE-EXISTING CONDITION

Received 27 March 2020;
Received in revised form 11 May 2020;
Accepted 26 May 2020

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ABSTRACT — This study was conducted with the aim of a dental examination of elderly patients and investigation of the relationship between dental and somatic diseases. 70 geriatric patients aged 60–89 years underwent dental examination and their dental status was determined (by conducting a standard oral examination, which consists of taking the anamnesis, check-up, evaluation of the hygienic condition, the intensity and prevalence of caries and non-carious lesions) and identification of a somatic disease. As a result, a relationship between diseases of the hard dental tissues, periodontium and oral mucosa and pre-existing condition was detected. Absolutely all respondents needed individualized routine hygiene and dental treatments followed by orthopedic treatment to restore adequate chewing function. The study showed that the relationship between a somatic pathology and the condition of the oral cavity reflects the comorbidity of diseases. To choose treatment tactics, it is necessary to take into account not only the severity and course of the underlying disease, but also the presence of concomitant pathology of different body systems. Therefore, the treatment of geriatric patients should be carried out in collaboration with a general practitioner for a unified approach for monitoring such patients.

KEYWORDS — geriatric patients, dental examination, pathology of the hard dental tissues, somatic diseases.

INTRODUCTION

In accordance with the requirements of the World Health Organization, in the process of examining a dental patient, a certain diagnostic sequence must be followed with the planning and use of various laboratory and clinical research methods [1–11]. The past decades have been characterized by demographic processes leading to an increase in the proportion of elderly population, which is common for most countries of the world, including Russia. Dental examination of these patients is difficult due to their low mobility, high disability and social disorientation [12]. The high prevalence of dental diseases in elderly

populations can be accounted first of all by the fact that the maxillofacial region becomes susceptible for age-related morphological and physiological changes. At the same time old age implies the presence of one or more concomitant diseases, which not only aggravates a dental problem, but also impedes its treatment [13]. However, at the moment, the choice of tactics for the treatment of oral diseases does not take into account the relationship with systemic disharmony of the body.

The aim of the study

is to conduct a dental examination of geriatric patients with accompanying pathology and to investigate the relationship of dental diseases to systemic illness.

MATERIALS AND METHODS

A dental examination was conducted in 70 elderly patients aged 60–89 years, WHO-classified elderly (60–74 years) and senile (75–89 years). The comprehensive examination included the use of basic and complementary methods of examination: collection of anamnesis, oral examination, determination of caries indicators of prevalence, non-caries lesions, caries intensity — index of KPU, hygienic composition of the oral cavity IS (ONI-simplified index) Green-Vermillion examination, periodontal condition with the Russell's periodontal index was carried out. X-ray examination was performed if necessary. As a result, treatment needs of the patients were identified, as well as the relationship of somatic pathology with oral diseases was investigated.

RESULTS AND DISCUSSION

As a result of the examination, we identified 100% need for dental integrated treatment of the elderly patients. At the same time 68 people (97.1%) revealed pathology of hard tissues of teeth. Mainly, caries and their complications (59 people — 86.7%) were detected in patients, 13.3% were non-carious lesions. However, we have found that the localization of lesions correlates with concomitant diseases. When located on chewing and drug surfaces, patients indicated the presence of gastrointestinal pathology. The presence of lesions in the cervical region indicated endocrine pathology, predominantly diabetes mellitus and thyroid diseases. A high degree of caries intensity was determined in all patients. So KPU was 21, 8±1.2, which is probably due to the presence of somatic pathology. At

the same time, there is no consensus in the domestic and foreign literature, which is the root factor in the development of somatic or dental pathology.

67 patients (95.7%) showed poor oral hygiene. Index Green-Vermillion (OHI-S) was $4, 7 \pm 0.22$. This is probably due to two factors: on the one hand - insufficient oral care, on the other — hyposalivation of the examined persons, and saliva does not perform its main functions (trophic, cleaning, protective). In addition, patients also complained about oral dryness. Apparently xerostomy is due to physiological atrophy of salivary glands. Accompanying pathology exacerbates this process. We observed the greatest dryness of oral mucosa in patients with thyroid diseases and type 2 diabetes mellitus. At the same time, in this category of persons there were multiple non-caries caused by saliva deficiency, as saliva, performing in full trophic function, is a source of phosphorus, zinc, calcium.

Periodontal diseases have been detected in 100% of cases. Among them, moderate and severe periodontitis prevails — 65 people (92.8%). The Russell periodontal index (PI) was $5, 8 \pm 0.33$, corresponding to stage III of the disease. In this category of people, endocrine diseases, atherosclerotic vascular lesions, kidney diseases were noted as a concomitant pathology. Also, the above-mentioned pathologies were often of a combined nature. A 5 person (7.2%) was diagnosed with periodontitis complicated by moderate periodontitis in remission. When filling an anquet as a concomitant pathology, patients noted thyroid hypofunction. We did not observe idiopathic periodontal diseases in this study. It should be noted that in the oral cavity of the examined persons there was an increased erasability of hard tissues of teeth. In view of the above, all patients examined needed orthopedic treatment to restore dental integrity and adequate chewing function.

However, in addition to the pathology of dental hard tissues and periodontal diseases, we also observed lesions of the mucous membrane of the oral cavity. In patients with the expressed symptom of *dry mouth*, the prints of tooth crowns on the mucous membrane of the cheeks, *bubble-vascular* syndrome in arterial hypertension, inflammatory diseases of the mucosa of the oral cavity and lips: chronic recurrent aphthous stomatitis, angular cheilitis, etc. — in diseases of digestive tract. Language cover and swelling were present in 35 people (50%), of whom 87% have digestive tract pathology, 82% — endocrine pathology.

CONCLUSION

Geriatric patients are a population that requires increased attention from a dentist. In 100% of cases, a dental pathology has been detected. At the same

time according to the localization of caries in most cases it is in the neck area, which is connected with both hyposalivation and periodontal pathology. In case of disruption of trophic function of saliva, in case of accumulation of food residues favorable conditions for development of caries and its complications are formed. When choosing treatment tactics, it is necessary to take into account not only the degree of severity and course of the main disease, but also the presence of accompanying pathology of different systems of the body. The study showed that the relationship between somatic pathology and oral condition reflects the comorbidity of diseases. Therefore, the treatment of geriatric patients should be carried out in a comprehensive manner with a general physician for a single approach to the observation of such patients. Thus, it has been established that dental diseases and their degree of expression are directly dependent on the presence of a pre-existing condition and the severity of its manifestations. However, the identification of the primary cause and elaborating a comprehensive, differentiated approach to the therapy and prevention of dental diseases demand a long-term careful attitude, which provides justification for further research.

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