

## Influence of Some Potential Risk Factors on Dental Therapy in Elderly Patients

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### Abstract

Increasing life expectancy affects the enlargement of elderly medical and dental patients. Ischemic heart disease, congestive heart failure, cardiac arrhythmia, syncope, cerebrovascular accident, lung inflammation, abdominal disturbances, dehydration and urinary tract infections are the most common emergencies in the elderly. It is advisable to do the blood test and a small coagulogram to the elderly on anticoagulant therapy before oral surgery procedures. Good local hemostasis-compression and suture, if needed, is indicate after the surgical procedure. It is emphasize that the patients with oropharyngeal dysphagia are predisposed for aspiration of loos natural or artificial teeth and poor fitted dentures, obstructing the proper chewing and swallowing. The proper maintaining of oral hygiene in elderly patients is emphasize to avoid general health and chronical illness complications.

**Keywords:** Elderly; Oral Health; Coagulation; Dysphagia

### Introduction

The increase in life expectancy in the world represents a new challenge for the dental and medical profession. By 2050. year, the number of elderly people will be doubled globally compared to 2015 year. Therefore, their number will reach almost 2.1 billion. A large number of people over 80 and older will grow more. Projections show that in 2050.year the oldest age group will be 434 million, which is three times that of 2015.year, when there were 144 million people over the age of 80. The older population grows faster in urban areas than in rural areas. At a global level between 2000. and 2015.year, the number of people aged 60 and over graded by 68% in urban areas, compared to a 25% increased in rural areas [1,2].

More and more elderly people are looking for professional help from doctors of medicine and doctors of dental medicine and different specialists. They depends on their professional care in their own homes or long-term care institutions. The nowadays dentists must deal with older patients who retain their own teeth. Individuals of older age are the special group of patients and in many ways different from children and adolescents. Why are older people more special than other age groups? They have health problems affecting the care of mouth and teeth. Medications that they take may interact with medication and the procedures used in general dental practice. Elderly suffers of the lack of motivation, inability to adapt on everyday life and communication difficulties. They are affect usually by one or few chronic diseases/diabetes, cancer, vascular, renal and heart disease. They have physiological changes following their age: reduced salivation and taste sensation, changes in bones and joints. Influence of psychological, social and cultural changes also affects the proper need for dental assistance [3].

### General health diseases as potential risks factor

The link between general and oral health becomes more and more important, especially in older people dental treatment. The tendency for perioperative complications and mortality depends on age (chronological more than physiological age), comorbidities (more than

three diseases significantly increases mortality), type of surgery and emergency. Ischemic heart disease, congestive heart failure, cardiac arrhythmia, syncope, cerebrovascular accident, lung inflammation, abdominal disturbances, dehydration and urinary tract infections are the most common emergencies in the elderly. Among surgical emergency conditions, traumatic injury of the extremities is most common caused by falls [4].

Before dental treatment, it is very useful to:

- Take full medical history of the patient including prescription drugs, herbal remedies and homeopathic preparations; ask about allergies and the side effects that have occurred so far.
- Laboratory findings of coagulation (anticoagulants, anticoagulants), blood glucose, blood images, urea and creatinine, depending on the procedure and medications the patient takes.
- Identify the cognitive status of patients using some of the short cognitive tests. It is important to distinguish delirium (most commonly caused by drugs and acute illnesses) from dementia.
- Give preference to local and regional anesthesia without sedation during the procedure.
- Keep in mind that central anticholinergics (atropine), antipsychotics and especially benzodiazepines exacerbate delirium.
- Monitor patients (blood pressure, pulse oximeter) if needed with unregulated hypertension and hypotension and take precaution in the use of vasoconstrictors.
- Appropriate antibiotic therapy (prophylaxis).
- If necessary for sedation, use short-acting drugs (propofol, etomidate), inhalation anesthetics (sevoflurane, desflurane) and nitric oxide. Avoid benzodiazepines and opioids (minimizing the risk of respiratory insufficiency).
- Oxygenation if necessary to prevent hypoxia and hypercarbia.

Dysphagia is also one of the common diseases of elderly representing disturbed swallowing, or a difficult passage of food and/or fluid from the mouth to the stomach. Patients with oropharyngeal dysphagia are predisposed for aspiration of loose natural or artificial teeth and poor fitted dentures, obstructing the proper chewing and swallowing. On the other hand, dental infections and poor oral hygiene increase the risk of pneumonia after aspiration of contaminated oral cavity contents. Feeding by a probe is also associated with colonization of the oral cavity with pathogenic bacteria. Taking this into consideration, regular care and dental cleaning and oral hygiene maintenance are very important procedures for preventing aspiration pneumonia in the geriatric population, especially for persons in institutions for the elderly.

Elderly patients with anemia shows changes of oral cavity, oral mucosa, gingiva and tongue, such as blisters, atrophic glossitis, angular stomatitis, magenta, osteomyelitis and paresthesia of the mental nerve. Anemia itself is not a contraindication for an invasive dental procedure, but in these patients, postoperative wound healing is difficult. People with neutropenia have an increased tendency to bacterial infections that can be life threatening if not targeted with antibiotic treatment on time. A broad spectrum of antibiotics are indicating in the prophylaxis of these cases during dental procedures [5,6].

When using warfarin, caution is required, as some medicines used in dental procedures may induce stronger effects of warfarin and cause bleeding. These are drugs such as metronidazole, erythromycin, tetracycline, miconazole, and non-steroid anti-inflammatory drugs [7].

Anemia is not a contraindication in invasive dental procedures but wound healing in these patients will slow down

- Postpone invasive dental treatment in patients with platelet count  $< 50 \times 10^9/L$  or neutrophil count  $< 1 \times 10^9/L$  and request hematologist opinion.

- Delay non-mandatory dental treatment in transplanted patients for one year.
- In patients with bleeding disorders, the use of aspirin and other non-steroidal anti-inflammatory drugs (ibuprofen, diclofenac, etc.) is contraindicated.
- Paracetamol is used to prevent postoperative pain.
- In patients with hemorrhagic bleeding disorders (hemophilia, von Willebrand's disease, etc.), prior to each planned operation, consultation of hematologists is necessary.
- Warfarin therapy should not be interrupted prior to planned operations, if INR is < 3.
- New anticoagulant drugs (rivaroxaban, dabigatran, apixaban) also generally do not require discontinuation of therapy at the time of surgery [8].

### Conclusions

The increasing number of elderly patients represents a new challenge for the dental and medical profession. Their general health problems affect the care of mouth and teeth. Medications that they take may interact with medication and the procedures used in general dental practice. It would be advisable before dental procedure to do a blood test and a small coagulogram to the patients with hematological disease or those on anticoagulant therapy in collaboration with hematologists. If needed, after oral surgery and tooth extraction, to ensure a good local hemostasis, compression or suture is performed. Special attention should be paid to patients with dysphagia due to possible aspiration of the drills, needles, fractured teeth or parts of broken prosthetic crowns, bridges or dentures. The maintaining of proper oral hygiene in elderly is must to avoid most of the general health complications.

### Bibliography

1. Čatović A., *et al.* "Gerontostomatologija, Zagreb, Medicinska naklada" (2010).
2. Baumgartner W., *et al.* "Oral health and dental care of elderly adults dependent on care". *Swiss Dental Journal* 125.4 (2015): 417-426.
3. Bots-Vantspijker P., *et al.* "Barriers of delivering oral health care to older people experienced by dentists: a systematic literature review". *Community Dentistry and Oral Epidemiology* 42.2 (2014): 113-121.
4. Čatović A., *et al.* "Dentalna medicina starije dobi u praksi". Zagreb, Medicinska naklada (2018).
5. Han JH., *et al.* "Validation of the Confusion Assessment Method for the Intensive Care Unit in older emergency department patients". *Academic Emergency Medicine* 21.2 (2014): 180-187.
6. Cao X., *et al.* "An update on pain management for elderly patients undergoing ambulatory surgery". *Current Opinion in Anesthesiology* 29.6 (2016): 674-682.
7. Titilope A Adeyemo., *et al.* "Orofacial manifestations of hematological disorders: Anemia and hemostatic disorders". *Indian Journal of Dental Research* 22.3 (2011): 454-461.
8. Bhandal S and Pattinson J. "How to support patients taking new oral anticoagulant medicines". *Clinical Pharmacist* 5 (2013): 268.

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