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ORAL HEALTH AMONG ELDERLY POPULATION IN INDIA- A REVIEW

Bhuvaneswari M Under Graduate Student, Department of Public Health Dentistry, Adhiparasakthi Dental College & Hospital, Melmaruvathur, Tamilnadu

Dr. Rajeswary K MDS, Associate Professor, Department of Public Health Dentistry, Adhiparasakthi Dental College and Hospital, Melmaruvathur, Tamilnadu

Dr. Kalaivani S MDS, Assistant Professor Department of Public Health Dentistry, Adhiparasakthi Dental College and Hospital, Melmaruvathur, Tamilnadu

Dr. Ravisankar MDS, Assistant Professor Department of Public Health Dentistry, Adhiparasakthi Dental College and Hospital, Melmaruvathur, Tamilnadu

ABSTRACT

A fundamental human entitlement is the right to good oral health, which is crucial to overall health. General health and oral health are interrelated. Knowing a few things about getting older is crucial for maintaining health. As people age, their body tissues become harder, waste accumulates in their cells, and lubrication decreases, impairing the ability of numerous organs to function properly. Aging process and accumulation of their dental needs from younger age lead to many oral health issues in elderly population. The rapidly expanding proportion of India's elderly population and the Quality of life of elderly people was largely affected by poor oral health which present distinct issues for the oral health specialists to consider and examine them. Awareness about the age related changes in the orofacial region among the elderly population is vital to maintain oral health as well as the general health. As a dentist, its his\her immense responsibility to know about the elderly patients'need and act accordingly. Still there is no evidence of Government policies for oral health care of elderly people.

INTRODUCTION

A prominent health concern of the twenty-first century is the ageing phenomenon. Increased longevity and decreased birth rates have combined to increase the number and proportion of people in the world who are 60 years of age and older .[1]By the end of 2030, India is expected to have more than 1.53 billion people, with a population growth rate of 1.58%. India currently has about 100 million senior people, and by 2050, that figure is projected to rise to 323 million, or 20% of the country's population. [2]The inhabitants' advanced age is made worse by the ongoing medical conditions they have and the drugs they take. Elderly people's dental needs are evolving and expanding. Managing elderly patients necessitates knowledge of not only the medical and dental elements of ageing but also a wide range of other issues, including mobility, independence, socialising, and sensory function.[3]

The general health of the elderly provides insight into their quality of life, but dental health also has a significant impact because dental issues can interfere with basic life functions like speech, eating, and chewing, which can cause irritability and loss of mental stability. [4]Having good oral health is a basic human right because it is a vital part of overall health. It significantly affects a person's quality of life and helps to maintain their physical, mental, and social well-being .[5]While elderly patients' needs for care are often minimal and difficult to predict, their dental hygiene needs would call for immediate attention. Complex oral conditions, oral mucosal lesions, systemic diseases, and medication use increase the susceptibility of (frail) elderly people to oral problems compared to younger age groups, especially when they have cognitive impairment. [6]

According to the National programme for the elderly in India by Ministry of family welfare classified the "elderly" population as

- The new or young elderly are those 65 to 74 years old;
- The old or mid-old are those 75 to 84 years old; they range from those who are healthy and active to those managing a variety of chronic diseases;
- The oldest-old are those 85 years and older, who tend to be physically frailer. This last category is the older adult population's fastest-growing subgroup.[7]
- In the past ten years, the "65 plus" population has suddenly exploded in all the countries, and India is no exception.

Factors Influencing Oral Health Of Elderly Population

Age:

Age-related chronic disorders like diabetes, hypertension, and hyperlipidaemia are all associated with oral diseases in the elderly. The elderly, on the other hand, frequently perceive oral health difficulties as a natural part of ageing, maybe because these conditions initially do not significantly affect their level of living.[8]

Socioeconomic Status:

According to research by Townsend et al., people from higher social groups use preventive healthcare the most frequently. One simple explanation is that more wealthy people are able to overcome any financial obstacles to receiving dental care.[9,10]A study by Bhuvaneshwari et al(2021)reported cost of treatment as a barriers for dental services by the elderly (67.8%),[11]The most stated barrier was the cost of the treatment.[12]Expense has been cited as a deterrent in certain studies of older adults receiving care who were functionally impaired or attended with a functionally disabled partner. According to reports, the majority of these elderly people lived off with meagre pensions. Research have shown that there is variation across different groups; according to some researchers, just 1.5–3% of community members consider cost as a barrier.[2]

Patient Obstacle To Receiving Care:

Patients may experience difficulty accessing dental services due to physical limitations or disabilities, transportation issues, a lack of understanding about dental services, or a lack of dental services in their area. [13]However, it was implied that many cited decreased mobility as a factor influencing them, even though only 20% cited transportation issues as a barrier to receiving care. [14]

Fear And Dental Anxiety:

In elderly adults who live in rural communities, dental anxiety is a widespread issue and a strong indicator of low OHRQoL.[15] Dental anxiety (DA) is a negative psychological response to stress. Specifically related to dental conditions.[16]. Dental fear

leads to a vicious cycle of dental avoidance, whereby those who experience dental fear visit the dentist less frequently, cancel more appointments, and are more likely to self-medicate, which disrupts their daily routines and their eating and sleeping patterns due to pain and dysfunction. As a result of their discomfort with the way their teeth look, they exhibit overt social avoidance behaviours.[17,18,19]

Common Oral Health Problems In Elderly

Periodontal Problem In Elderly Population And Management:

As the age advances both the likelihood of developing periodontal disease and the number of teeth getting extracted as a result of it also increases. The effects ofperiodontitis and tooth loss leads to lower oral health related quality of lifein turn it affects their general health also. Toothache, infection, and missing teeth can all affect elderly people's food intake, which can result in malnutrition and raise their risk of developing a number of non-communicable diseases. These factors can also reduce their social interactions and change their sleeping and eating patterns.[5]

The evidence indicates that poor dental hygiene among institutionalised elderly is a far bigger issue than is generally thought.[20] For the majority of older persons who require periodontal therapy, conservative, nonsurgical treatment may be the best therapeutic choice. Surgery is recommended for patients whose first therapy alone is insufficient to treat their periodontal condition.[21]According to a study by Yadav et al, the elderly population in old-age homes has very poor periodontal health. To improve the periodontal health and oral health-related quality of life of this significant and vulnerable population, periodontal care programs for them should be intensified.[22]

Dental Caries And Restorative Management:

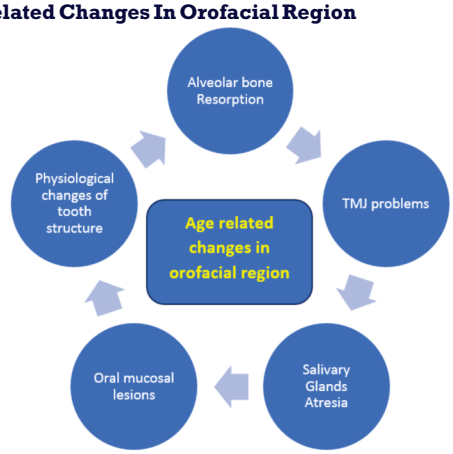
The prevalence of dental caries was high among the elderly population under study, and there were notable disparities between those living in rural and urban areas. Even though their unmet treatment needs were high, only a tiny minority of older people had proof of prior restorative care.[23]According to a study by Doifode et al., the older population of urban Nagpur had a 43.2% prevalence of dental caries.[24]Prevention of progression of dental caries in elderly populationincludes caries risk reduction, earlydetection and appropriate regimen should be practised.[25]The choice of restorative methods is more or less the same for elderly population and the younger population. However, in the former, it is suggested to use direct plastic restorations that are legal because they can be easily and affordably repaired or replaced.[2]

Edentulism

Oral cavity diseases rank highly among the numerous illnesses and impairments that affect the elderly. In this context, tooth loss in the elderly is a significant concern. They have issues because there aren't enough facilities for treatment and data on morbidity profiles.[26]Some of the difficulties in eradicating edentulism in the nation are the lack of understanding of dental rehabilitation, the difficulty of accessing dental care facilities, the high cost of paid treatment, etc.[27]The World Health Organization (WHO) estimates that 30% of elderly persons over 65 years old worldwide are missing all of their natural teeth.[28]

In a study done in Bhopal, Shrivastav et al. found that only 4.2% of old people who were edentulous had complete dentures.[29]According to a cross-sectional study by Nayar et al., among elderly Indians over 60 years of age, the prevalence of total and partial edentulism was 8.1% and 10.2%, respectively.[30]It was observed that patients in institutions expected more psychological care and attention from the professionals. The dentistry profession as a whole must recognise its duty to treat elderly patients' concerns in a way that improves their quality of life.[31]"A smile knows no age limit." Most elderly people have independent social lives, which makes them concerned about their looks.[2]

Age Related Changes In Orofacial Region



Alveolar Bone Resorption:

Becoming older is linked to a gradual loss of bone mass, which causes osteoporosis. Although no direct link has been demonstrated, age-related osteoporosis is frequent and may contribute to alveolar and potentially basal bone shrinkage in edentulous patients. Loss of teeth is mostly correlated with alveolar bone atrophy. In the absence of dentures, its severity worsens with age and causes a loss of facial height as well as an upward and forward posturing of the mandible. The mandible experiences more widespread and fast alveolar bone loss than the maxilla.[32]

Temporomandibular Joint (TMJ)

It can be challenging to discern between osteoarthritis-related and aging-related changes in the TMJ. The primary age changes, excluding those brought on by osteoarthrosis, are connected to the remodelling of the articular surfaces and disc in response to functional changes brought on by tooth loss. Displacement of the disc, particularly anterior displacement, may be caused by remodelling. The retrodiscal tissues may undergo adaptive changes that are characterised by a decline in cell and vascularity and an increase in collagen density, and they may eventually serve as an articular disc. Yet, in some circumstances, the disc's posterior attachment, in particular, may be perforated as a result of the displacement, causing gradual joint deterioration.[32'33]

Salivary Glands:

In elderly people, xerostomia, or dry mouth, and decreased saliva production are common complaints. Around 30% of people 65 and older are estimated to suffer from xerostomia and salivary hypofunction, as well as the associated oral and pharyngeal effects.[34]The use of prescription and non-prescription drugs is the most frequent cause of salivary problems .According to reports, more than 400 drugs have been linked to the negative side-effect of salivary gland dysfunction, and 80% of the most frequently prescribed prescriptions can result in xerostomia.[35]

Oral Mucosa:

In elderly patients, the clinical appearance of the oral mucosa frequently looks the same as in younger ones. The clinical characteristics and appearance of the oral tissues, however, can change in older patients due to aging-related alterations such as mucosal injuries, mucosal infections, and hypo functioning salivary glands.[36]Age causes the stratified squamous epithelium to shrink, lose its flexibility, and atrophy. The susceptibility to infection and trauma is further heightened by a diminishing immune reactivity. Oral mucosal problems in elderly people may result from an increase in the incidence of systemic and oral diseases as well as from increased medication use. Older people may develop oral

lesions including vesiculobullous, desquamative, ulcerative, lichenoid, and infectious lesions.[37]

Tooth Structure:

Age-related alterations are those that occur gradually over time and go hand in hand with the ageing process in the tooth. Dentin and cementum are continuously deposited, but tooth enamel is damaged as a result of physiological wear on the tooth surface. Physiological turnover is typically low. Ion-exchange mechanisms cause the dental enamel of the aged person to become less porous and more brittle. The macroscopic alterations that often affect tooth shape include wear and attrition.[38]Moreover, there are dentinal changes brought on by ageing, such as secondary dentine development and dentine sclerosis, which reduce the volume of the pulp chamber.[39]

Mucosal lesions:

Poor oral hygiene, a high tooth mortality rate from dental caries, and the effects of periodontal disorders all contribute to the poor oral health of the elderly tribal population. Due to heavy tobacco use, oral mucosal ulcers were frequently observed. Despite having poor dental health, quality of life appears to be suffering as a result of decreased attention and growing systemic issues.[40]Santosh Patil et al, conducted study on Oral lesions, that including those brought on by tobacco use, betel nut use, trauma, and prosthetic devices, were present in 64% of the patients. , which can cause additional symptoms such halitosis, xerostomia, or oral dysesthesia and interfere with a person's regular social activities, oral lesions can cause discomfort or pain that interferes with mastication, swallowing, and speech.[41]

Oral health related Quality of life:(OHRQoL)

For people of all ages, having good oral health is essential to their quality of life. A subgroup of health-related QoL, oral health-related QoL (OHRQoL) measures how well people can eat, sleep, and interact with others as well as their self-esteem and happiness with their mouth health. Those who needed a prosthetic in either jaw had low OHRQoL, which was consistent with earlier research. Strong evidence was found in a recent meta analysis, irrespective of the OHRQoL instrument utilised, linking tooth loss to OHRQoL deterioration [42]The needs for oral health in elderly people are different from those for other types of health, as well. They are more likely to use mouth-drying drugs, which can worsen oral infections and encourage tooth decay. The whole health and quality of life of the body are impacted by dental health issues.[43

Barriers and scope for development of geriatric dentistry:

Since geriatric dentistry is a multidisciplinary field, education and training must cover the typical psychological and physiological changes that occur as people age as well as the effects of these changes on the provision of dental care.In the late 1970s, it was realised that geriatric dentistry education was necessary.The majority of dental schools in the USA cited funding, curriculum time, and faculty expertise as their three main expansion-related roadblocks. The biggest obstacles to geriatric dentistry in underdeveloped nations, particularly India, are a lack of qualified specialists and limited financial resources. The training of geriatric dentists requires a financially prudent and advantageous strategy due to the limited oral health budget.Numerous elderly people also have multiple chronic diseases in addition to oral health issues. For a more thorough evaluation of their patients, dental professionals must increase their understanding of geriatric medicine and gerontology.[44]

Government Policies:

It is clear that our healthcare system does not place much emphasis on dental health. With rising demand and skyrocketing health care expenditures, governments are finding it difficult to keep up. As a result of the government's focus on cost reduction and the underrepresentation of dental programmes in public policy, there are few possibilities for promoting elderly oral health care and research.[45] Every industrialised and growing nation, including India, is seeing an increase in the demand for geriatric dental treatment. The top government endeavour should be oral health policy, which should be developed and implemented with a special focus on the elderly. In addition, a thorough research agenda that identifies key areas of concentration is required in order to improve the oral health and healthcare of older people. [1]The National Health Mission included the National Oral Health Programme (NOHP), which was unveiled in 2013. The nodal organisation is the National Oral Health Cell inside the Ministry of Health and Family Welfare. In addition to the district-level or lower dental care facilities currently in place, money is granted to the state and district-level oral health cell to build a single dental clinic with the required personnel, equipment, and supplies.[5]

In India, offering elderly dental treatment is hampered by a number of issues.

- Since the provision of healthcare is a state-controlled enterprise, each state has its own unique planning and execution processes. There isn't a distinct oral health policy in India right now.
- Next, oral healthcare accounts for the smallest portion of the total health budget. Only emergency dental care is often covered by health insurance, which is only provided to 10% of those working in the organised sector.
- Third, because older adults have low literacy rates and therefore poor utilisation of government programmes, there is little awareness of oral health prevention.
- Fourthly, rural areas, where more than 71% of elderly persons live, have very low dentist to population ratios.
- Fifth, because geriatric care is not heavily integrated into dental disciplines at the undergraduate level, dental graduates lack a geriatric care orientation. Geriatric dentistry courses are not offered at the postgraduate level.

There have been suggestions made to improve the provision of elderly oral health care in India [5]

Preventive Strategies:

In people who are not entirely edentulous, preventive dentistry must focus on the three stages of prevention Preventing disease will help you avoid its onset, Prevention of progression, and recurrence As well as prevention loss of function and loss of life.[2]The use of fluoride toothpaste, twice-daily brushing, daily interdental cleaning, and avoiding sugar are all recommended methods for maintaining good oral health. Regardless of their dentate status, it is advised that elderly patients visit the dentist at least once every six months for a clinical evaluation, depending on their capacity for oral hygiene. Maintaining daily plaque control is challenging for older adults. Devices are available to make brushing easier for patients who have trouble holding a toothbrush due to arthritis or a stroke.[46]

CONCLUSION:

In India, as the elderly population undervalue the importance of oral health, it leads to several oral health issues and decreases the oral health related quality of life which in turn it affects their general health also. So it is recommended to create awareness about the influence of oral health with that of their general health and vice versa. As a dentist, it is his\her immense responsibility to know about the elderly patients' need and act accordingly.To overcome this problem government should develop polices to improve the oral health of the elderly.

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