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BARRIERS TO THE PROVISION OF COMPREHENSIVE DENTAL CARE IN GERIATRIC PATIENTS

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Abstract

India has a large geriatric population of 77 million comprising 7.7% of its total population. Increasing numbers of older people and the decreasing rates of edentulism highlight the importance of dental education that focuses on oral health and aging. Barriers to dental care have been investigated in adult population for several years. They include the functional and medical status of the individual, transportation and accessibility difficulty, financial considerations, previous patterns of dental utilization, lack of education and fear. This review article attempts to analyze the different barriers confronted by the elderly population in India which should help us to deliver comprehensive dental care

Introduction

The increasing proportion of elderly adults in the population requires more frequent dental care. Most dentists have little or no contact with severely or terminally ill patients in their daily practice and thus limited experience in the areas of Gerodontology and palliative dental care.[1] The WHO defines older adults in developed countries as those people aged 65 years or over. In developing countries, the elderly population is considered to be over the age of 60years.[2] India currently ranks fourth among countries of the world in the absolute size of the aged population (currently 77 million). In 1981, the elderly population in India accounted for 6.3%, which is know 7.7%. It is estimated that by the year 2020, this will increase to about 11% , which in absolute number will be staggering 142 million persons above the 60 years of age.[3] The two striking features regarding the elderly population of India are: (i) the rate of growth of the elderly is much faster than the growth of total population; and (ii) the feminization of the total population.

Elderly people are rapidly becoming a large neglected and dentally under treated population and there is an urgent need for dental services for the elderly worldwide.[4]The older the individual the greater the need for dental care, because of anatomical changes, wear and tear of teeth, changes of the surrounding tissues, restorations and dentures. [5-10] The dentist plays an important role in geriatric team because oral function and health care essential to the patients quality of life and general health status.[11]In a dental practice environment, treatment can be easily provided however, the age, medical status, socioeconomic status, and most important level of awareness of the geriatric patient form barriers in providing dental care. On the other hand the mind of the dentist has a barrier that these patients are too delicate and fragile to withstand certain procedures. Other factors such as oral hygiene practices, social and cultural beliefs and attitude, perception regarding oral health and function and philosophy of the dentist can all influence oral health in elderly.[12] This paper will review some of the most common barriers in lending the comprehensive dental care in elderly world wide and India in particular.

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Review

Age

In 1987, Rowe and Kahn introduced the term 'successful aging'. Successful aging refers to modification of behavioral process to achieve the best possible outcome to aging. [13] The concept of successful aging has three main components. Physiologic aging of the body systems, along with local factors and alterations may interact with essential oral structures or functions. The dentition becomes more sclerotic and yellowish, owing to thickness and composition of the underlying dentine, as enamel wears. This results in a small pulp chamber, which may decrease the capacity of pulp to respond to trauma. The oral environment changes with age; diminished salivary flow (xerostomia) and altered quality of the saliva in patients on medication, loss of tooth bearing alveolar bone, changes in the basal jaw bone, weakness of the musculature and masticatory apparatus, tongue atrophy, neuropathy, thinning and friability of epithelium.[14]

Medical status

The oral cavity manifests many signs of drug intervention in the geriatric population.[15]The high prevalence of multiple chronic medical conditions such as cardiovascular decrease, diabetes mellitus and arthritis and the likelihood of multiple drug therapies, dramatically increase the chances of drug specific adverse effects and drug-drug interactions. Additionally, age related changes in heart, liver and kidney function may alter drug distribution, metabolism and excretion resulting in higher serum drug levels.[16] Access to dental service may present a barriers as a result of physical incapacity or disability, travel problems, terminal illuness, cognitively impaired patient, or lack of dental service in given area.[17,18]

In reviewing the oral side effects of the most frequently prescribed drugs for the elderly patient, it is noted that nearly all of them have the potential for oral side effects. These may be effects of the medications, toxicity reactions, allergic reactions, or idiosyneratic reactions to the medications. Xerostomia, dysgeusia, and stomatitis are the most frequently reported drug induced oral side effects in the literature. Gingivitis and bleeding gums, lichenoid eruption, and erythema multiforme are also frequently reported and collectively represent soft tissue effects on medications.[19, 20]

Diet and Nutrition

Loss of few or multiple teeth in the elderly brings about a shift in dietary habits from complex to simple carbohydrates, increasing the caries risk and eventual loss of teeth. Additionally, failure to restore missing to restore missing teeth causes increased spacing between the teeth, increasing the risk for proximal caries. A higher percentage of elderly consuming a non vegetarian diet had decayed and filled teeth in comparison with elderly consuming a vegetarian diet.[21]

Socio economics

It has been suggested that utilization of preventive health care is highest among higher social classess.[22, 23] More affluent patients are able to overcome any financial barrier to dental care.Ability to pay however in not the sole determinant as reported by Rise that free health service did not result in an increase in uptake the dental services.[24]Kiyak has suggested that the higher social classes tend to be better educated and are potentially more likely to be familiar with and no adopt favorable attitude towards the maintenance of oral health.[25]

In an elderly population, oral health variables and income, education and social class are correlated. Social status like marital status and lifestyle factors such as smoking and chewing tobacco, alcohol abuse, etc., are shown to be related to oral health of elderly. In a study conducted by Naseem Shah et al they found that the elderly with medium literacy levels were 1.28 times and those with higher literacy levels were 2.37 times were more likely to experience caries compared with low literacy levels. They correlated this with the higher consumption of soft, sticky and refined carbohydrates by the higher socioeconomic class.[21] Denture wearing was found to be significantly correlated with socioeconomic status, literacy level and marital status. An intact natural dentition was more common in those living with spouse and complete denture wear was more common in widowed elderly.[26]In a study conducted by Anehosur et al, it was concluded that there is a low 'felt need' which calls for improving the awareness among

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elders and motivating them to use the services available for them so that they lead a socially and economically productive life. Also the family attitude towards the patient especially with regard to the presence or absence of spouse has been identified as a major barrier in this study.[27]

Psychological barriers

Firstly, the prevalent myth that the loss of teeth is natural part of aging process, dominates their thoughts. Psychological factors such as depression and isolation leads to neglect of personal and oral hygiene.[28, 29]Older individuals experience major life events like loss of loved ones through death or institutionalization or their own loss of independence. Sudden decisions to postpone dental treatment and deterioration in oral home care may signal a reactive depression accompanied by loss of self-esteem.[30]The determination towards treatment is the attitude of the dentist towards the elderly.[25] Some dentists who hold a negative stereotype of the elderly are more likely to provide rudimentary treatment option, than dentists with positive stereotypes, through the nature of stereotype is complex.[31]

Dentist Barrier

Lack of mobile units, unfavorable working conditions, increasing economical pressure in the dental practices and a lack of information in the domain of Gerodontology are barriers in providing dental care for elderly. [18,32]Various studies have shown that dentists prescribe removable prosthesis over fixed prosthesis to the elderly. At the sometime they are less likely to examine and give full treatment especially restorative treatment to them. Studies have demonstrated that lower social group of elderly patients are do not to receive advanced dental care.[34]

Access and venues are also perceived to be determinants towards provision of care for the elderly, lack of portable equipment was considered to be a barrier in providing care along with lack of space.[32] Several studies have demonstrated that a significant number of dentists feel some difference in the treatment of older patients for a variety of reasons including lack of knowledge about Gerodontology including drug interactions.[35,36]

Socio Demography

80% of the elderly population resides in rural India. 30% live below poverty line,73% are not literate, 75% are economically dependent, 45% suffer from chronic diseases, and 5.4% are immobile. Oral cancers, which commonly manifest in older age group, constitute 13-16% of all body cancers. India has 185 recognized dental schools from which 12,000 dental graduates each year. The total dentist population ratio is 1:23,000.[26]

However, the distribution of elderly in urban and rural areas is very uneven. In urban areas the dentist population ratio is 1:15000, where in rural areas it is 1:115,000. The dental manpower tends to segregate in urban areas. Only 20% serve 80% of rural elderly. The primary health centers, the basic unit of primary health care does not have the provision for dental care. Health insurance companies do not reimburse expenses on dental treatment. Dental treatment is expensive in the private sector, and considered optional by the majority of elderly and their care providers. In addition there is lack of any preventive services such as fluoridation of drinking water and oral health education programs.

Discussion

Elderly in India, have a very low expectation about quality of life. Negligence,illiteracy and awareness go hand in hand for their present status of general health and oral health in particular. Geriatric education has not received as much importance as health care delivery. Geriatric medicine is in its infancy and geriatric dentistry in almost nonexistent in India.Elderly and especially their family members do not think that dentures are important. They already incur expenses on medical treatment for other chronic illness and therefore are reluctant to spend further on dental treatment.Knowledge about oral health is low in rural areas. Sometimes they wait for all their teeth to be lost before they seek treatment. The misconception that tooth is an inevitable part of the aging process is widely accepted. Political authorities, government agencies, Dental Council of Indiaand IDA do not regard the dental needs of the elderly as the priority and consequently public attention and funding is scarce and insufficient. The older the individuals, the greater the need for dental care. The elderly must understand and desire dental treatment and it must be in concertwith what we as a professional can provide.

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Dental care in geriatrics is a framework of decision making that allows the dentist to develop most appropriate care in the best interest of the patient after weighing all the underlying factors. Although it applies to a patient of any age, because the number of modifying factors increases and their interactions become more complex as people age. It is particularly relevant for elderly population.

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