OLDER PERSONS AND DIABETES

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Globally, burgeoning population of older adults poses diverse health challenges that include medical, cognitive, psychological, social and financial dimensions, all of which can seriously impact diabetes care. India's population trajectory between the years 2000 and 2050 indicates a 55% increase of total population from 1008 to 1572 million but a 326% increase of 60+ (76 to 324 million) and a 700% increase of 80+ individuals (6 to 48 million) (1). Magnitude of diabetes among older adults in India is also huge and this includes both old age onset and young onset diabetes which is carried forward to 60+ age. Roughly a quarter of people in their 70s and 80s are diabetic and in addition many are in prediabetic stage. According to Longitudinal Ageing Study in India (LASI), self-reported prevalence of diabetes mellitus among Indian adults aged 45-59 was found to be 9% while among the older adults aged 60 and above it was 14% (2). In terms of global diabetes epidemic, India ranks second after China with 77 million people with diabetes. Of these, 12.1 million are aged >65 years, which is estimated to increase to 27.5 million in the year 2045 (3).

Majority of older adults in India have financial limitations, are rural based or living under marginalised conditions. Although lifestyle management including diet control and exercise is the fundamental aspect of diabetes care and is also highly cost effective, primary care physician needs to realize that advancing age brings about some cognitive decline, a fatalistic attitude and lack of will and motivation that is enough to interfere with the compliance of medical advice given to him. Careful counselling and talking with the patient and his family is therefore important. Compliance will also improve if the older adult patient is advised to enhance his cognition through brain challenging activities like new reading, befriending grandchildren, playing puzzles, learning a new skill such as a musical instrument, computer, a language or by social networking. Moreover, dietary advice should take into account age related alterations in appetite, taste, smell and difficulties in chewing, swallowing or digestion while extent and type of physical activity recommended should consider cardiorespiratory reserve and status of joints, bones, vision, nerves and muscles etc.

Management of diabetes in old age has to be individualised since care of older diabetics is complicated by wide heterogeneity among these patients (4). Such a heterogeneity could be with respect to the level of their physical and mental functioning, expected life expectancies, duration of diabetes, prevalence of chronic complications and relative burden of co-morbidities like hypertension, heart disease, stroke, arthritis, cognitive impairment, incident falls, chronic kidney, liver and pulmonary diseases. Economic, social and emotional deprivation also affect some but not others. Consequences of ageing like higher cardiovascular risk, wider glycaemic variability, increased risk of hypoglycemia, greater deleterious effects of persistent hyperglycemia, altered pharmacokinetics and differentials in the type of living arrangement (e. g. with family, living alone or in old age home) also determine the therapeutic strategy for older diabetics (5).

Care of diabetes in older adults becomes more difficult in the presence of certain complex clinical conditions, the geriatric syndromes which traditionally comprise the 5 Is i. e. **I**mpaired intellect (confusion, delirium and dementia), **I**mbalance (with resulting falls and fractures), **I**mmobility (associated with frailty, sarcopenia and impaired lower extremity performance), **I**ncontinence (multiple aetiology) and **I**mpaired vision and hearing. Sleep disorders like insomnia and sleep apnoea have been recently added to the list of geriatric syndromes (6).

Key to proper medical treatment for older diabetic comprises rational choice of antidiabetic agents and an easily understood simplified regimen that would achieve the desired glycaemic goals with or without the support of trained informal or formal care giver.

Furthermore, caring for older diabetic is far more than keeping sugar, lipids and blood pressure under control. Primary physician also needs to ensure subjective well-being and good mental health for the remaining period of life specially for an older individual. Ordinarily many older adults have psychological and social problems, but when it comes to people in their 90s and 100s, many studies have observed that despite declining physical health, nonagenarians and centenarians have better mental health compared to younger adults (7,8). Since better resilience and adaptability attained from their long-standing coping abilities, bonding with family for social support and connecting with religion are thought to be determinants for better mental health and longer life span, both formal and informal care providers need to build and strengthen these determinants through well accepted methods in order to preserve a good quality of life for older individuals with diabetes also.

Short summary and recommendations

- India's population of older adults including those with diabetes is increasing by enormous proportions.
- Strong emphasis on cost effectiveness and simplification of management strategies is needed for the care of diabetes in older adults.
- Motivational counselling, cognition enhancement and social enrichment should be employed as important tools to improve treatment compliance by older adult diabetic patients.
- In view of significant heterogeneity among older adult diabetic patients, treatment should be tailored according to individual needs in order to achieve desired glycaemic goals.
- Improving subjective well-being and quality of life is an essential care component particularly for older adult diabetic patients.

References

1. National Policy for Senior Citizens Draft. Revised 2011. Ministry of Social Justice and Empowerment, Government of India.
2. International Institute for Population Sciences (IIPS), National Programme for Health Care of Elderly (NPHCE), Ministry of Health and Family Welfare, Harvard T. H. Chan School of Public Health (HSPH) and the University of Southern California (USC) 2020.

Longitudinal Ageing Study in India (LASI) Wave 1, 2017-18, International Institute for Population Sciences, Mumbai.

3. Pradeepa R, Mohan V. Epidemiology of type 2 diabetes in India. Indian J Ophthalmol. 2021 Nov;69(11):2932-2938. doi: 10.4103/ijo.IJO_1627_21. PMID: 34708726; PMCID: PMC8725109.
4. Schernthaner G, Schernthaner-Reiter MH. Diabetes in the older patient: heterogeneity requires individualisation of therapeutic strategies. Diabetologia. 2018 Jul;61(7):1503-1516. doi: 10.1007/s00125-018-4547-9. Epub 2018 Feb 7. PMID: 29417185; PMCID: PMC6445482).
5. Kumar V. Glycaemic control in elderly diabetics with dementia. In: RSSDI Update Section 5 on Diabetes in the elderly. Research Society for the Study of Diabetes in India, Lucknow, India. 2015; 50-55.
6. Gupta A, Inamadar SK, Goel A. The New Geriatric Syndromes J Ind Acad Geriatrics 2019; 15(1): 33-36
7. Scelzo, A., Di Somma, S., Antonini, P., Montross, L., Schork, N., Brenner, D., & Jeste, D. Mixed-methods quantitative–qualitative study of 29 nonagenarians and centenarians in rural Southern Italy: Focus on positive psychological traits. International Psychogeriatrics, 2018; 30(1): 31-38. doi:10.1017/S1041610217002721
8. Thomas ML, Kaufmann CN, Palmer BW, Depp CA, Martin AS, Glorioso DK, Thompson WK, Jeste DV. Paradoxical Trend for Improvement in Mental Health With Aging: A Community-Based Study of 1,546 Adults Aged 21-100 Years. J Clin Psychiatry. 2016 Aug;77(8):e1019-25. doi: 10.4088/JCP.16m10671. PMID: 27561149; PMCID: PMC5461877.