Point of view

Care of the elderly: a multidisciplinary approach

Samaraweera D N[1]

Journal of the Ceylon College of Physicians, 2014, **45**, 45-48

Case vignette

Mrs. S, a 68-year-old woman was seen at an Elders' Clinic in Medirigiriya. She complained of bilateral knee pain, backache and loss of appetite. Her BMI was 26 kg/m^2. She gave a history of two falls (provoked) during the last three months. She was found to be depressed when assessed using the GDS 4 scale. Her cognitive function was normal. Her blood pressure was 130/80 mm Hg. She had bilateral impairment of hearing. She had decreased visual acuity, vision 6/60 in one eye. She had a slow gait assessed by the get up and go test, due to the pain caused by osteoarthritis. She did most of her activities independently despite these problems.

The problems identified in this lady at the Elders' Clinic held in the community were hearing impairment, visual impairment, depression, obesity, osteoarthritis and slow gait. This is a patient who had recent hospital admissions and many out-patient visits, but the problems detected at the Elders' Clinic have been unfortunately missed due to time constraints in busy general medical clinics and due to the lack of emphasis on systematic evaluation of the elderly. It is indeed important to detect these co-morbid problems in elderly patients, and equally important to address these problems to provide solace for them.

Multidisciplinary and multi-sector support is of immense help to such a patient. She is in need of the services of a Physician/Geriatrician, ENT Surgeon, Eye Surgeon, Psychiatrist, Rheumatologist, Orthopedic Surgeon, Physiotherapist and Nutritionist. The support of the Social Services Department, and other non-governmental organizations are required to provide finances for hearing aids, spectacles, knee joint replacement etc.

Hidden impact

The case presented is by no means rare in our local practice; it certainly may not catch the attention if one is seeking a hidden diagnosis for academic interest. Nevertheless, it reveals the hidden impact of health problems among the elderly that are often overlooked and require multidisciplinary and multi-sector involvement to improve the quality of life of senior citizens of our country. The health problems of the elderly remain under-recognized in our health system. There is paucity of data in Sri Lanka with regard to health problems of the elderly.

Globally, the elderly are defined as people aged 65 years and over, while in the developing world people aged 60 years and above are considered as elderly. Globally, the number of older persons (aged 60 years or over) is expected to more than double, from 841 million people in 2013 to more than 2 billion in 2050.[1] Sri Lanka has one of the most rapidly aging populations in the world. It took 115 years in France and 85 years in Sweden for their populations aged over 60 years to increase from 7% to 14%.[2] The elderly population which was 9.2% in 2000 is predicted to increase to 16.7% in just 21 years in Sri Lanka.[2]

Functional status of the elderly

The problems encountered by the elderly are casually overlooked during hospital admissions as well as in routine medical clinics. A preliminary study done among the elderly admitted to a unit at National Hospital of Sri Lanka detected depression in 40%, cognitive dysfunction in 73%, 6/60 or worse visual acuity bilaterally in 34%, hearing impairment in 8.3%, unprovoked falls in 23%, with 57.6% being unable to or taking longer than 30 seconds to perform the timed get up and go test.[3]

A study on patients (65 years and over) attending the routine clinics of a family physician revealed that specific screening methods were able to detect dementia in 14.5%, depression in 17.1% and a significant percentage with impaired activities of daily living.[4] The authors of both studies point out that these problems in the elderly would have been missed if their functional status was not specifically assessed. The functional status of a geriatric patient is the best indicator of prognosis and longevity. It is defined as how well a person is able to provide for his or her own daily needs. This is not assessed in routine admissions or clinic visits. Functional assessment can be assessed by a tool which consists of an objective measurement of cognition, depression, vision, hearing, nutrition, gait and balance and assessment of activities of daily

[1] *Consultant Physician, Base Hospital, Pimbura, Agalawaththe, Sri Lanka. Founder President, Sri Lanka Association of Geriatric Medicine.*

living. This tool can be used by any physician in outpatient clinics for elderly and inpatient assessment of the aged.

Data for justification

It is important to determine the prevalence of the above mentioned conditions that needs assessment in our community to justify the implementation of a structured program for functional assessment and support for the elderly in need of assistance.

Visual problems have been found in a high proportion of the elderly. The national survey in elders (60 years and above) has revealed poor vision in 65% and complete blindness in 2%.[5] Community studies in the western province[6] and Matale district[7] have found visual problems in 65% and 57.8% respectively of the study populations (aged 60 and above). Thus the assessment of visual acuity by a simple Snellen's chart is essential with access to appropriate corrective surgery.

Hearing impairment was found in smaller proportions. The national survey in elders in 2004 found poor hearing among 28% with complete deafness in 2%.[5] A community study done in Kandy Municipality area in those 65 years and above revealed hearing impairment in 37%,[8] while in the Western province among those 60 years and above 21% had hearing defects. In a preliminary study of hospital admissions at the National Hospital of Sri Lanka among 65 years and older, 8.3% had impaired hearing.[3]

The World Health Organization estimates the global prevalence of dementia in those above 60 years to be about 5% for men and 6% for women. A descriptive study done in those 65 years and above in a suburban population found a prevalence of dementia of 7.1% with a male predominance; all patients with dementia detected in this study were looked after by their own family members, some facing great inconvenience.[9] A community based study in those 60 years and over in the Matara District revealed cognitive impairment in 11.1%.[10] These rates are higher compared to global figures; the variation in methodology used to detect dementia being a possible reason for this difference. A study done in a semi urban population (> or = 65 years) in Ragama found a prevalence rate of dementia of 3.98% with a female predominance (61%) which reflects global figures. 71% of the diagnosed patients had Alzheimer's disease, and 14.3% had vascular dementia in this study.[11] Studies done in Sri Lanka point out the need for establishment of a system to identify mental illness among the elderly and the need for community based services to promote positive mental health through community based committees and centers for the elderly.

Depression in our local elderly population is addressed inadequately; voluntary admission of depression is not common in our society due to cultural factors and the attitudes in the community with regard to tolerability of suffering. This aspect has not been assessed in most of the community studies done in the elderly. In a study done to find the prevalence and factors associated with the mental status of elderly in the Matara Municipality area, 39.6% were detected to have poor mental health status.[10] Poor self-assessed health status, hospitalization during the previous year, taking treatment for more than 3 months for chronic diseases, poor hearing and poor vision were significantly associated with poor mental health outcome of elders.[10] Mental health services have undergone recent development with the introduction of Medical Officers in Mental Health and the expansion of psychiatry services. More studies need to be done with regard to improving the mental status of the elderly using the available expertise in the field of psychiatry.

The activities of daily living which include basic activities of daily living (BADL) and instrumental activities of daily living (IADL) have also been assessed in several community studies. Impairment of IADL has been higher compared to BADL and males have shown to perform better in ADL in general.[6] Independence in basic activities of daily living and instrumental activities in daily living were found to be significant predictors of better mental health.

Problems of gait and balance and incidence of falls have been studied. A study to determine the incidence of home accidents during a period of one month found the incidence of home accidents among the elderly (60 years and above) was 10.9 per 100. Most of the home accidents were falls. The significant associations of these home based falls were hypertension, arthritis, and the mobility of the upper part of the body.[12] Presence of more than two chronic diseases, dizziness, history of falls within the previous year and poor mobility had statistically significant association with falls. Disabled persons had a higher risk of falls compared to non-disabled.[15] Performance based measures such as rising from a chair without using arms and semi tandem gait were found to decrease with increasing age.[6]

The nutritional status of the elderly is also poorly addressed in the present health system. In a study done in the District of Matale, the prevalence of under nutrition based on BMI among the elders living in estate, rural and urban sectors was 58%, 40%, and 22.3% respectively, with an overall prevalence of 38.4%. In this same study 56.6% of the sample was reported to have poor oral health with 25.4% found to be edentulous.[7] The nutritional status of the elderly

needs to be assessed on a wider scale, with programs to correct nutritional problems and to consider regional variations.

Among health problems detected in elderly the commonest was joint pain which was reported in as much as 42%; the other problems in descending order reported in the National Health survey of elders 2004 being hypertension (20%), wheeze (18%), diabetes mellitus (8%) and ischaemic heart disease (8%). A community study carried out in the Western Province revealed joint pains in 32%, hypertension in 22%, heart disease in 14%, and lung disease in 14%. Thus we have to consider the burden of non-communicable diseases among the elderly population when evaluating an elderly patient.[6]

A practical approach

At present we have a National Policy for Elders but we do not have a structured program for detection of the problems, treatment of conditions /syndromes and follow up of elderly patients. The experience I had in organizing Elders Clinics in the Medirigiriya Medical Officer of Health (MOH) area using the existing resources could give us an insight on how we should set about initiating a program at national level. The clinics were organized in Grama Niladari divisions with the cooperation of the MOH Medirigiriya. Their staff consisted of the MOH, public health midwife (PHM), public health inspector (PHI), while medical officers of the Medirigiriya Base Hospital took part in Elders' Clinics. The Consultant Rheumatologist of Polonnaruwa General Hospital participated and arranged community based rehabilitation with the help of the hospital physiotherapist for those in need. The Consultant Psychiatrist agreed to accept referrals from the Elders Clinics for further evaluation of patients screened positive for dementia and depression. The MOH arranged for the Eye Surgeon to conduct clinics for patients detected to have visual defects, and the Community Dentist took part in the clinics for assessment of oral health and correction of abnormalities. The Grama Sevaka with the help of the senior citizens in the area arranged the clinic in his division. The elderly were mobilized to the clinics by the PHMs and PHIs. The senior citizens were treated with great respect and volunteers also took part in providing necessary equipment and in the provision of healthy food and refreshment.

The difficulty in arranging referrals to the required specialties due to the services being already overburdened and finding resources and finances to arrange hearing aids and lenses were some of the problems we faced during follow up of these patients. The importance of the existing human resource such as the staff of MOH divisions, Grama niladharis and other community volunteers from Elders Societies in the implementation of such a program for the elderly at community level was well demonstrated.

Much to be done

Geriatric care needs to be developed as a service in the hospitals in addition to parallel community based programs. It is important to improve the knowledge and skills with regard to the management of elders among doctors as well as nurses. Geriatrics needs to be included in the undergraduate and postgraduate curricula. Training in Geriatrics should be focused towards medical as well as paramedical staff. All patients above 60 years would need to be screened for functional assessment using simple tools such as GDS4 (assess depression), Minicog test (Assess dementia), Get up and go test (assess mobility), Barthel index (assess activities of daily living).[13] Some of these tools have been validated in Sinhala for the elderly population of Sri Lanka, the 10 item barthel scale has been validated in Sinhala and the study also showed a high measurement concordance between the standard 10 and 5 item shorter scale of the Barthel index.[14] The Minimental state examination and the Geriatric depression scale in Sinhalese has been validated for our elderly population in Sri Lanka.[16,17] Referrals should be made to multiple disciplines and follow up arranged where necessary. The services provided by the Social Services Department need to be integrated with the health services in the community and hospital. Social workers would have to play an important role in the assessment of home conditions and in attending multidisciplinary meetings held in hospitals regarding discharge plans. Respite care needs to be arranged with the help of social workers in homes or institutions to give time off for care givers. Taking care of care givers is also an integral part in an effective Geriatric program. Creating an old age friendly atmosphere in the hospitals with a dementia and wheel chair friendly staff is fundamental to implementing a care program for elderly.

Thus Sri Lanka needs a comprehensive program to enable quality care of the elderly; the data collated and presented is adequate to justify this. The implementation of such a program would pave the way for more research which would lead to an improvement of the quality of life of the elderly.

References

1. World Population Aging United Nations. New York 2013, Department of Economic and Social Affairs Population Division.
2. Sri Lanka Demographic transition the challenges of an aging population with few resources, Oct 10, 2012, Human Development Unit, South Asia Region.

3. Weerasuriya N, Jayasinghe S. A preliminary Study of the hospital admitted older patients in a tertiary care hospital: *CMJ* 2005; **50**:18-9.

4. Ramanayake RPJC. Reasons for encounter and existing medical and psychosocial problems of Geriatric patients in a general practice. Dissertation submitted for the degree of Doctor of Medicine in Family Medicine for the Post Graduate Institute of Medicine, University of Colombo. 2004.

5. National Secretariat for elders 2004, National Survey of Elders, 2003 - 2004. Ministry of Women's Empowerment and Social Welfare Colombo.

6. Fernando D N, Senevirathne R de A. Physical Health and functional ability of an elderly population in Sri Lanka. *CMJ* 1993; **36**: 9-16.

7. Jayakody KWGG. Physical health status of the elderly in the district of Matale and risk factors for under nutrition among the rural elderly: Thesis submitted to the Post Graduate Institute of Medicine, University of Colombo, Sri Lanka for the degree of Doctor of Medicine in Community Medicine 2002.

8. Balasuriya S, Nugegoda DB. Health aspects of an elderly population: *CMJ* 1993, **38**, 29-30.

9. Kathriarachchi ST et al. Prevalence of Dementia in a suburban community in Sri Lanka: *Journal of the Ceylon College of Physicians* 2010, **41**, 26-29.

10. Gunarathne IE. Prevalence and factors associated with the Mental Health Status of Elderly in the Matara Municipal Council area: Dissertation submitted to the Post Graduate Institute of Medicine, University of Colombo for the Degree of Master of Science in Community Medicine. (2009).

11. de Silva HA, Gunatilake S B, Smith AD. Prevalence of dementia in a semi urban population in Sri Lanka: report from a regional survey: *Int J Geriatr Psychiatry* 2003; **18**(8): 711-5.

12. Jayasekera DPAARN. Home accidents and selected factors associated among those aged 60 years and above in the MOH area, Wattala: Dissertation submitted for the requirement for the degree in Masters of Science in Community Medicine to the Post Graduate Institute of Medicine, University of Colombo, Sri Lanka. (2009).

13. Reichel's Care of the Elderly, Clinical aspects of aging, sixth edition 14-26.

14. Lekamwasam S, Karunatilake K, Kankanamge SKP, Lekamwasam V. Physical dependency of elderly and physically disabled; measurement concordance between 10 item Barthel index and 5-item shorter version. *Ceylon Medical Journal* 2011; **56**(3): 114- 8.

15. Ranaweera AD, Fonseka P, Pattiya Arachchi A, Siribaddana SH. Incidence and risk factors of falls among elderly in the district of Colombo. *Ceylon Medical Journal* 2013; **58**(3). 100-5.

16. de Silva HA, Gunatilake SB. Mini Mental State Examination in Sinhalese: a sensitive test to screen for dementia in Sri Lanka. *Int J Psychiatry* 2002; **17**: 134-9.

17. Kulathunga M, Umayal S et al: Validation of the Geriatric Depression Scale for an elderly Sri Lankan clinic population. *Indian Journal of Psychiatry* 2010: **52**(3) ; 254-6.