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Ageism

Mathur A

“Should a particular form of therapy be offered at this age?” Often in our practice we are faced with this dilemma. Medical practice has been influenced by the inherent age bias existing in society. However there is a significant biological basis to that bias. Aging is a complex, highly individualized, multidimensional process that is associated with changes in the genetics, biochemistry, physiology, and anatomy of the body. As the body ages, deterioration occurs in functional, emotional, socioeconomic, and cognitive areas.¹ In general, older patients are more likely to have, and not tolerate, complications from treatment as compared to younger patients. They are also less likely to recover from these complications. Usually the fact that a patient is elderly enters as a consideration into our assessments, judgments, and decisions about treatment. Majumder et al have shown usefulness of thrombolytic therapy in acute myocardial infarction even in patients above 85 years of age.²

The elderly are often judged based on perceptions, preconceived notions, and deep-seated beliefs. Although the elderly population is an extremely heterogeneous group, the dominant image in society depicts the elderly person as dependent, frail, and a burden on community resources, as well as sickly, unkempt, and incompetent. This bias is more consistently expressed in a subtle manner. Age bias ranges from individual disrespect to formal policies that discriminate against the elderly population. In 1969 Robert Butler (the first director of the National Institute on Aging) coined the term “Ageism”.³ Ageism is defined as “prejudice toward, stereotyping of, and/or discrimination against any person or persons directly and solely as a function of their having attained a chronological age which the social group defines as old”.⁴ Ageism is rooted in language, attitudes, beliefs, behaviors, and policies. Ageism exists on many levels, from discriminatory attitudes toward older adults; discriminatory behaviors against older adults; prejudicial

comments and poor treatment by service providers; and discrimination of older adults by institutionalized practices and policies, such as mandatory retirement and age-based promotions and raises.⁵ In fact, there is evidence that older adults often do not perform well partly due to personally held beliefs that because of their age, they cannot perform well.⁶

Despite frequent contact with the elderly, clinicians are often influenced by ageist views and deep-seated biases. Age bias is also at times a criterion in the allocation of health care resources.^{7, 8} Age, socioeconomic status, and the caregivers’ personal values have been found to affect the way in which caregivers communicate with, impart information to, and treat their patients. Further evidence suggests that caregivers’ personal opinions and preferences, as well as their nonprofessional values, influence, if not determine, their professional behavior. Elderly are often undertreated, or treated differently, for many common diseases which compromise potentially curative therapy, while overtreatment risks unacceptable toxicity.

The elderly are more likely than younger patients to be treated with substandard therapy for cancer, which is only partially explained by the higher prevalence of comorbidities in the elderly population. Physicians tend to undertreat elderly patients because of the perceived minimal benefit of chemotherapy or the risk of toxicity from standard chemotherapeutic regimens.^{9, 10}

It is possible that age bias also affects caregivers’ attitudes toward the use of elderly patients in clinical trials. Thus, it appears that the exclusion of elderly patients from clinical trials is predominantly physician, rather than patient driven.^{11, 12, 13}

Caregivers often assume that life-prolonging therapy is more important to younger patients, whereas symptom relief is more important to elderly patients. We often assume that our elderly patients have lived long, fulfilling lives; therefore, it is not our job to prolong their lives as much as make the rest of their lives more

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comfortable but we should not be overly surprised that this person, who happens to be elderly, actually wants to live a longer life.

It is important for us to provide our elderly patients with reasonable treatment options and biological-based explanations. Countering the negative perception of ageing is essential. Incorporating ethical principles into clinical practice could facilitate health professionals in the provision of optimal treatment and care for elderly patients addressing the needs of this patient group in relation to the ethical dilemmas of truth telling, consent and relationships, and power. Clinicians must learn how to balance their personal and professional beliefs with the needs and preferences of their patients in order to provide their patients with optimum care. What is clear is that “the elderly should not be denied adequate treatment simply on the basis of age alone”.¹⁴

References

1. Hebert R. Functional decline in old age. *CMAJ* 1997; 157:1037–1045.
2. Majumder B, Kumar A, Ranjan P et al. Thrombolysis in myocardial infarction: Age no bar. *Journal of the Indian Academy of Geriatrics* 2007; 3:49-51
3. Butler R N. Age-ism: Another form of bigotry. *The Gerontologist* 1969; 9: 243-246.
4. American Psychological Association resolution on ageism. <http://www.apa.org/pi/aging/ageism.html>
5. Cavanaugh, JC. Adult development and aging. 2nd Edition, Pacific Grove, CA: Brooks/Cole 1993.
6. Rodeheaver, D. Ageism. In I.A. Parham, L.W. Poon, & I.C. Siegler (Eds.). ACCESS: Aging curriculum content for education in the social and behavioral sciences. (pp. 7.1-7.43), New York: Springer Publishing, 1990.
7. Kilner JF. Age as a basis for allocating lifesaving medical resources: an ethical analysis. *J Health Polit Policy Law*. 1988 Fall;13:405-423.
8. Howe EG, Lettieri CJ. Health care rationing in the aged: ethical and clinical perspectives. *Drugs Aging* 1999 ;15:37-47.
9. Peake MD, Thompson S, Lowe D, et al. Ageism in the management of lung cancer. *Age Ageing* 2003;32:171–177.
10. Dale D. Poor prognosis in elderly patients with cancer: the role of bias and undertreatment. *J Support Oncol* 2003;1(suppl 2):11–17.
11. Kemeny MM, Peterson BL, Kornblith AB, et al. Barriers to clinical trial participation by older women with breast cancer. *J Clin Oncol* 2003; 21:2268–2275.
12. Bandyopadhyay S, Bayer AJ, O'Mahony MS. Age and gender bias in statin trials. *QJM* 2001; 94:127-132.
13. Yellen SB, Cella DF, Leslie WT. Age and clinical decision making in oncology patients. *J Natl Cancer Inst* 1994; 86:1766–1770.
14. Busch-Devereaux E, Kemeny MM. Surgery in the elderly oncology patient. In: Hunter CP, Johnson, KA, Muss HB, eds. *Cancer in the Elderly*. New York: Marcel Dekker, Inc., 2000.

Thrombolysis in Myocardial Infarction: Age No Bar

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Abstract

The efficacy of thrombolytic therapy in the elderly particular those over 85 years remain a topic of ongoing debate. Although elderly patients account for a disproportionate amount of cardiovascular mortality they have typically been under presented in randomized clinical trials. Till date, no randomized trial has compared thrombolytic and primary coronary intervention in the elderly. Almost 15 years after the publication of first large randomized trial of thrombolytic therapy, controversy remain regarding its effectiveness in the elderly. We are presenting a short series of seven cases that were older than 85 yrs and had underwent thrombolysis and most of them had favorable outcome.

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Introduction

Cardiovascular disease is the most common cause of death and disability in the elderly. Nearly 60% of patients who die after hospitalization for acute myocardial infarction are aged 75 years or more. Increasing age is the most important long term adverse prognostic factor after an infarction. Thrombolysis with streptokinase reduces mortality in elderly.¹ However it may be associated with higher rate of stroke in the older patients especially with risk factors viz. hypertension, low body weight, use of oral anticoagulants before admission, female sex and history of cerebrovascular disease. Although the incidence of stroke is higher in elderly people, the greater overall mortality reduction with thrombolytic treatment may result in net clinical benefits. Despite

this evidence, advanced age remains one of the strongest hurdle for not receiving thrombolytic therapy even in those who had presented in golden hours for thombolysis. This short case series would lend support to the notion that elderly with acute myocardial infarction who are not having above mentioned risk factor have much to gain from thrombolytic therapy and age should not be an exclusion criterion for administration of thrombolytic therapy.

Material and Methods

Case records of patients with acute ST elevation myocardial infarction (STEMI) who were older than 85 years and presented within 12 hours of chest pain and who underwent thrombolysis with streptokinase in CCU of Institute of Postgraduate Medical Education & Research (IPGMER), Kolkata between 2005-2006 were reviewed. The clinical presentaion, treatment received and final outcome till discharge or death were evaluated. Total seven patients presented during this period. The clinical characters and complications during stay are represented in Table 1.

Discussion

Ageism in medicine may be partly a consequence of lack of awareness of evidence-based literature on the treatment of older people. Patient older than 70

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TABLE I: Clinical presentation of the patients

Character	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7
Age (yr).	87	89	93	85	85	95	98
Sex (M/F)	M	M	M	M	M	F	M
Chest pain duration(hrs)	6.5	5	9	11	8	8.5	7
Infarct territory	Anterior	Inferior	Inferior	Inferior With RV	Anterior	Inferior	Inferior
Diabetes	No	Yes	No	No	Yes	No	No
Hypertension	Yes	Yes	No	No	No	Yes	No
Past H/O IHD	No	No	No	No	Yes	No	No
ST elevation leads; score	V3-V6; 6mm	II, III, aVF; 4mm	II, III, aVF; 4mm	II, III, aVF; 5mm	VI, V2, V3; 8mm	II, III, aVF; 6mm	II, III, aVF; 5mm
Conduction abnormality	None	2°AV block (Wenkebach)	3°AV block	3°AV block	None	2°AV block (Wenkebach)	2°AV block (Wenkebach)
Complications following thrombolysis	Gum bleed	Hematuria	None	None	Apical VSD	Gum bleed hematuria	None
Resolution of conduction abnormality	-	6 th day	4 th day	4 th day	-	9 th day	3 rd day
Final outcome	Discharged day 10	Discharged day 14	Discharged day 10	Discharged day 12	Expired 3 rd day	Discharged day 14	Discharged day 7th

years account for a third to half of patients with acute myocardial infarction admitted to hospital and 80% of death due to acute myocardial infarction occur in those who are older than 65 years out of which 60% were aged 75 or more.^{2,3} Despite extensive studies of thrombolytic treatments in large number of patients, we lack data on elderly subjects and particularly those who are older than 85 years.

Over 60% of trials have excluded patients aged over 75 years, with higher rate of exclusion in studies involving invasive procedure.³ An overview of thrombolytic trials showed that only 10% of patients were aged over 74 years.⁴ In both GISSI -1 and ISIS-2 trial, a trend toward decreased mortality with streptokinase versus control in patient age >75 years had been documented as well as a recent decision analysis model that incorporated these data suggests

that streptokinase therapy is cost effective in elderly.⁵ Even in the absence of specific contraindication older patients still receive thrombolytic treatment less often than younger individuals. The increased incidence of adverse events with increasing age particularly intracranial hemorrhage has inhibited widespread use of thrombolytic treatment among elder patients. In the GUSTO-1 trial, the incidence of intracranial hemorrhage in patients receiving streptokinase was 0.42% in under 75 years and 1.23% over 75 years.⁶

In our case series of seven patients older than 85 years who underwent thrombolysis with streptokinase who developed basal VSD and died on 3rd day. None of them developed the most feared complication of intracranial hemorrhage and successful thrombolysis had been achieved even at age of 98 years.

References

1. Second International Study of Infarct Survival (ISIS-2) Collaborative Group: Randomised trial of intravenous streptokinase. *Lancet* 1988; 2: 349-360.
2. Raskmadsen C, Jensen G, Kober L, et al. Age related mortality, clinical heart failure, and ventricular fibrillation in 4259 Danish patients after acute myocardial infarction. *Eur Heart J* 1997; 18: 1426-1431.
3. Gurwitz JH, Col NF, Avorn J, et al. The exclusion of the elderly and women from clinical trials in acute myocardial infarction. *JAMA* 1992; 268: 1417-1422.
4. European Secondary Prevention Study Group: Translation of clinical trials into practice, a European population based study of the use of thrombolysis for acute myocardial infarction. *Lancet* 1996; 347: 1203-1207.
5. Krumholz HM, Pasternak RC, Weinstein MC, et al. Cost effectiveness of thrombolytic therapy with streptokinase in elderly patient with suspected acute myocardial infarction. *N Engl J Med* 1992; 327: 7-13.
6. The GUSTO Investigators. An international randomized trial. Comparing four thrombolytic strategies for acute myocardial infarction. *N Engl J Med* 1993; 329: 673-682.

Health Care Avoidance Among Elderly Residing in Old Age Homes in Surat: Does it Construe Health Care Rationing?

Kumar M*, Bansal M**, Bansal RK***

This study explores the avoidance to seek health care among 68 elderly residing in four old age homes in Surat city through face to face interviews. It was carried out from October 2006 to January 2007. Consent from the organizers and the residents of these old age homes was taken prior to study. A semi-structured discussion schedule was employed containing variables on socio-economic aspects, diseases and disability profile, health care seeking behaviour, dietary patterns, physical and leisure activities, variables regarding homes for the elderly dignity. Revisits were made in case and where we wanted to gather further information or for any clarification or for providing medical care to them. The information collected was noted in individual interview forms. The collected information was entered in Microsoft EXCEL and subsequently analysed using SPSS package supplemented by manual analysis of the qualitative data. Ethical review was not carried out as it involved no experimentation and our interventions were limited to medical care to them and to ascertain if they have unmet needs requiring our attention in the aftermath of the devastating floods of August 2006 which inundated the entire city. The present article deals with issues pertaining to their avoidance of medical care.

All of the four homes had some system for

providing medical care to its residents as given in Table 1. However, none of these homes had made any system for availing external medical facilities save for one home whose health care facility was actually a major city hospital of the same trust.

The average prevalence of the diagnosed physical morbidities among these residents was 1.3 and all of these morbidities were related to chronic and degenerative diseases. Tragically the majority of the elderly (57%) avoided seeking medical care for their ailments despite the availability of medical care facilities. The barriers in seeking health care according to their diagnosed ailments are given in Table 1 and 2 and mainly consisted of high costs and difficulties to reach the treatment centres. The avoidance was lower among those whose spouses were cohabiting with them.

The majority (84%) had utilised public health care. The private health care facilities were being utilised by the elderly who still had savings and these were all residing in the paid homes. In one instance of elderly in a select community wherein the number of persons who had remained unmarried were high and they had often donated their savings to the community trusts. These trusts were managing this home. Initially these respondents had reported of good satisfaction levels with the quality of services that they had received. However, these services had deteriorated with a recent change in the trustees and they were now being sadly neglected.

None of the respondents had any knowledge about any geriatric health care facilities and the vast majority were ignorant about the need for screening tests. It needs to be mentioned that almost all of these residents had complaints relating to mental health, mainly depression, which is known to have a negative effect on the health care seeking behaviours. These

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Table 1: Reasons for health care avoidance

Type of old age home	Medical care facility	Average diagnosed morbidity (Sample)	Avoidance of health care seeking Number (%)	Reasons for this avoidance of seeking of external/ specialised medical care
1- Paid home-fully furnished, attached toilet & bathroom	Daily free OPD services by a non-resident MBBS doctor	23 (N=28)	06	Too Expensive/ High out of pocket expenditure = 04 (%) Difficulty to reach these centres =03 Difficulty to reach these centres because of mobility impairment =02 Wish to die and go to God's house = 02
2- Paid home-shared room, toilets & bathrooms shared floor wise	Panel of doctors on call for serious patients otherwise residents went to their clinics for free treatment	6 (N=06)	05	Too Expensive/ High out of pocket expenditure =02 (%) Difficulty to reach these centres because of mobility impairment =01 Difficulty to reach these centres because of visual impairment =01 Wish to die and go to God's house = 01
3- Free home-dormitories with common toilets & bathrooms	Specialised hospital located inside campus and health care availability for residents was free	12 (N=19)	06	Difficulty to reach these centres = 01 Difficulty to reach these centres because of mobility impairment =01 Past rude experience with nurses =01 Past rude experience with peons =01 Wish to die and go to God's house = 02
4. Free home for a select community, shared room, and facilities floor wise	Medium sized hospital of same community adjacently located. Essential bedside care available.	12 (N=15)	10	Difficulty to reach these centres because of mobility impairment =04 Past rude experience with doctors =01 Past rude experience with nurses =01 Wish to die and go to God's house = 04

elderly were not disclosing the fact that they were residing in old age homes while seeking care as they felt it to be demeaning and stigmatising. Sometimes they returned without seeking the required care if they perceived it to be too expensive. For instance there was an elderly requiring orthopaedic belt from many years and there were diabetic and hypertensive patients on irregular medications. A very important intervention would be to sensitize the health care providers and the trustees to the need for transportation and gentle handling of the aged patients.

Traditionally old age was equated with “the golden years” and the aged were revered aptly reflected in the Sanskrit saying “mathru devobhava”, “pithru devobhava” and “guru devobhava” and neglecting this parental duty earned social opprobrium and ridicule.¹ The NFHS surveys and other studies have documented culturally embedded norms about respect and care for elderly by the family. However, we are witnessing inopportune erosion with the phasing of joint family system and a shift from the intergenerational family as the central site of aging and elder care to an increasing reliance on individual, state, and private institutions.² In absence of well organized social networks and universal social security the scenario for the aged remains grim.³ Leaving aside the issue of seeking expensive health care, the fact remains that the elderly are often ignorant that they need medical care and a significant percentage of their morbidities remain sub-clinical.⁴⁻⁷ It is in this context that the provision of health care services for the elderly need appropriate government intervention.

The increase in the elderly consequent to “population ageing” is inevitable and implies fewer children to support these aged. Simultaneous socio-cultural and economic changes have robbed the elderly of their status, self-esteem and their functional family roles. Their declining physiological, mental and cognitive functions with advancing age pose challenges to prevent physiological ageing. In India according to the 2001 census, 7.7% of the total population were above 60 years of age and this age group is steadily increasing implying the Herculean task of caring for them.³ Policy makers seem to refrain from introducing state owned expensive government programmes for the

Table 2. Exact quote of respondents for health care avoidance

Old age home	Diseases for which health care seeking was avoided	Reasons	Exact quotes of the respondents	Whether fulfilled by investigators during this project work	
1. (N=6)	Diabetes	Too Expensive Physical impairment	1) I can't afford medical care as I have other important needs 2) The treatment costs are beyond my income 3) I have no money as I have no source of income so I cannot afford treatment 4) The centre is too far off for me to be able to reach the treatment centre	Partially Met- Medications provided free of cost for a limited period	
	Prolapsed vertebral disc Hypertension	Too Expensive Difficulty to reach these centres Wish to die and go to God's house	5) I have been advised orthopaedic belt and I can't afford to purchase it 6) The centres are far from here and very difficult for me to approach 7) At my age to go via public conveyance and stand in queue is too difficult 8) I am tired of life and do not want to live anymore	Met- Orthopaedic belt was provided by us free of cost Partially Met- Medications provided free of cost for a limited period. Partially Met- Counselling and medication were provided free of cost	
	Dental problem	Physical impairment (husband) & also wish to die and go to God's house (wife)	9) I can not stand in queue for longer duration so I cannot reach this centre 10) Time to go to God's house	Dentures were made available at subsidized rates for the couple. Wife was counselled	
	Back pain	Difficulty to reach these centres	11) Suffering from very long period and go to health centre is not possible for me	Met- Medications were provided free of cost	
	Diabetes	Too Expensive	12) Treatment is expensive and I have no source of income	Partially Met- Medications provided free of cost for a limited period.	
	Hypertension	Too Expensive Physical impairment Wish to die and go to God's house	13) I have no money to purchase medicine Health centres are too far and I can not go public conveyance Waiting for God's call tired of life	Partially Met- Medications provided free of cost for a limited period.	
	Prostatic enlargement	Difficulty to reach these centres because of visual impairment	Not able to move out side the room without support	Patient refused assistance and we are working on this issue	
	Diabetes	Difficulty to reach these centres Physical impairment Past rude experience with peons	I can not walk up to OPD block and wait in queue for my number I am unable to walk up to hospital building The peons are very rude and do not allow me to meet the doctors directly	Not met- We plan to sensitize the hospital authorities after our indepth studies to be conducted soon	
	2. (N=5)				
3. (N=6)					

Hypertension	Wish to die and go to God's house Past rude experience with nurses	Waiting for call from almighty The nurses are very harsh and I do not want to face them again	Not met- We plan to sensitize the hospital authorities after our indepth studies to be conducted soon
Mouth ulcer	Wish to die and go to God's house	I am tired of taking all shorts of medicines, so I am waiting for my call from the house of God	Partially Met- Counselling done as access to medicines was available
Diabetes	Physical impairment Past rude experience with nurses Wish to die and go to God's house	I could not walk every time to hospital building for check up and medicine Here nurses are not very friendly, they started shouting at me whenever I asked for any work/ favour I am tired of life and want to go to God's house	Not met as they had access to their own trust hospital, we do plan to sensitize their trustees to such problems
Hypertension Osteoarthritis	Physical impairment Wish to die and go to God's house Past rude experience with doctors Wish to die and go to God's house	I am not able to walk so I am unable to go for regular treatment to doctor I am unable to walk up to OPD block so I am not interested in treatment I do not want to take any more medicine and I am waiting for God's call Doctor get irritated of my queries so I avoid visiting hospital I tired of experimenting all types of remedies so now I am waiting for my number to God's house	

care of the elderly.⁸ Thus the elderly constitute a highly vulnerable group meriting programmes to fulfil their unmet health care needs. Comprehensive primary health care, as envisioned in the Alma Ata Declaration, applies equally to the elderly and should form the fundamental basis for policy formulations on the elderly. Helpage India has given pragmatic suggestions which are yet to see the light of the day.

The specialty of Geriatric Health would much help meeting unmet needs and sensitise the health care personnel to the problems of the elderly.⁹ As Dhar has pointed out that our elderly population remains neglected with no separate hospital wards and no specialized courses for doctors and nurses in geriatrics.¹⁰ Recently, Indian Medical Association has organized an ambitious project for rural elderly with emphasis on Geriatric care. Experiences in the area of maternal and child health have documented that user friendly services can reduce the unmet needs. It is ludicrous to expect physically disabled elderly to reach health facilities located far away and with long queues and waiting periods. The absence of government initiatives to evolve the specialty of geriatrics and evolve pragmatic approaches to meet the unmet needs of the elderly actually construes a form of rationing of health care for perhaps the weakest and most neglected section of our society and should be condemned. Government needs to encourage involvement of private sector through special incentives alike those given for encouraging export oriented units. It is a shame that when developed countries are outsourcing care of their elderly to India, our elderly remain neglected.¹¹

References

1. Reddy PH. The health of the aged in India. *Health Transit Rev* 1996; 6: 233-244.
2. Lamb S. Cultural and moral values surrounding care and (in)dependence in late life: reflections from India in an era of global modernity. *Care Manag J* 2005; 6: 80-89.
3. Usha Ram. Changing age composition of population of India, Indonesia and Thailand: Health issues of elderly. Pune Gokhale Institute of Politics and Economics. (www.iussp.org/Bangkok2002/S17Ram.pdf).
4. Ramachandran A, Ramachandran S, Snehaltha C, et al. Increasing expenditure on health care incurred by diabetic subjects in a developing country: a study

from India. *Diabetes Care* 2007; 30: 252-256.

5. Gupta I, Sankar D. Health of the Elderly in India: A Multivariate Analysis. *J Health Popul Dev Ctries*. 24 June 2003. (URL: <http://jhpdc.unc.edu/>)
6. Hazarika NC, Biswas D, Mahanta J. Hypertension in the elderly population of Assam. *J Assoc Physicians India* 2003; 51: 567-573.
7. Kumar V. Health status and health care services among older persons in India. *J Aging Soc Policy* 2003; 15: 67-83.
8. Knodel J, Chayovan N, Siriboon S. The Familial Support System of Thai Elderly: an Overview. *Asia Pac Popul J* 1992; 7: 105-126.
9. Goel PK, Garg SK, Singh JV, et al. Unmet needs of the elderly in a rural population of Meerut. *Indian J Community Med* 2003; 28: 65-66.
10. Dhar HL. Emerging geriatric challenge. *J Assoc Physicians India* 2005; 53: 867-872.
11. Goering L. Outsourcing the elderly: Low-cost care, made in India. Chicago Tribune: The Seattle Times Company; Friday, August 3, 2007- 02:07 A.M. (www.centerltc.com/).

Determinants of Psycho-Social Health Conditions of Elderly in Urban Area of Allahabad

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Abstract

Background: In India, psycho-social issues concerned with ageing remains as a relatively under-researched area inspite of rapidly growing geriatric population as it is usually understood that old age is not a social problem in our country. The fact of rapidly changing epidemiological transitions in India mainly due to socio-economic reasons calls for appropriate policy actions for psycho-social health interventions for elderly. **Objectives:** To investigate psycho-social health conditions of elderly persons and to investigate risk factors of feeling of psycho-social stress felt by respondents. **Study Design:** Community based cross sectional study. **Sampling Design:** Stratified two-stage random sampling technique **Setting:** urban Allahabad, Uttar Pradesh. **Participants:** 160 elderly persons willing to participate in the study were interviewed for collecting information on some socio-demographic and personal characteristics, anthropometric measurements, and psycho-social parameters. **Statistical Analysis:** Descriptive statistics, normal test of significance, odds ratios along with their respective 95% confidence intervals. **Results:** Living arrangement of respondents showed that only 94 (58.7%) lived with their children. Among 132 respondents living with either spouse or children, 48 (36.4%) were not satisfied with the attitude of their family members towards them. There was no significant difference ($P>0.20$) between proportions of males and females taking part in family decisions. Among all 78.8% respondents reported some health problems while 38.7% respondents felt psychosocial stress. Feeling of loneliness, unfavourable attitude of family members, negative feeling of respondents towards family members, non-participation in family decisions, and non-involvement in social activities were found to be significant risk factors of psycho-social stress feeling. **Conclusions and Suggestions:** The study suggests that health problems of elderly should be tackled with some psycho-social intervention. There is a need to protect and promote healthy traditions and values of Indian culture by developing good intra-familial and social relationships. Database on nature and dimensions of geriatric problems including psycho-social conditions is also desirable.

KEY WORDS: Living arrangement, Psycho-social issues, Psycho-social health conditions, Socio-cultural context.

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Introduction

Old age is a natural aspect of life. It may be possible to slow down the process of ageing, but it cannot be stopped. With the increasing pace of population ageing, the health of elderly persons has been the focus of recent attention. Concerns for issues regarding problems of elderly have increased worldwide after the Second World Assembly on Ageing held in

2002. According to World Health Organization (WHO) estimates, 470 million elderly persons above 65 years of age are expected by the year 2020 in developing countries, which will be more than double the number in developed world.¹ According to Census figures, the percentage of elderly persons (60+years) in India has risen from 6.7% in 1991 to 7.4% in 2001. The percentage of Indian elderly population above 65 years of age is reported to be 5.0% and is increasing with an annual growth rate of 3.0% against entire population growing annually with a rate of 1.7%.^{2,3} Predicted growth rate in this population is expected to reach at the level of 8.3% in 2016. In Uttar Pradesh (UP), the proportion of elderly population above 60 years of age is reported to be 7.0% as per Census 2001. In spite of the fact that elderly population is growing rapidly,

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research on issues of elderly could not get proper attention.

Considerable variations in morbidity exist with respect to gender, place of residence, and socio-economic conditions. During the ageing process certain inevitable changes occur resulting in functional decline. Factors like nutrition, psycho-social conditions, diseases and availability of health care facilities at national and regional level are mostly responsible for these changes. Health problems in old age include various types of illnesses, impairments, disabilities and handicaps. Existing data indicate a significant morbidity among the aged in India, much of which remain sub-clinical. Information on morbidity profile of geriatric population is essential for planning health care facilities for elderly.

A recent study conducted in Nepal highlights negative influence of social aspects like decreasing trend of joint families, lack of family support, feeling of loneliness, economic dependence, lack of cultural values etc on health related conditions of elderly.⁴ In India, psycho-social issues concerned with ageing remain relatively under-researched area as it is usually understood that old age is not a social problem in our country. The fact of rapidly changing epidemiological transitions mainly due to socio-economic reasons in India calls for appropriate policy actions for elderly. Therefore, the present study was conducted with the following specific objectives:

1. To investigate psycho-social health conditions of elderly persons.
2. To investigate risk factors of feeling of psycho-social stress felt by the respondents.

Material and Methods

The study was conducted in Allahabad, Uttarpradesh from April 2004 to June 2004. A total of 160 elderly persons above sixty years of age including 80 males and 80 females were selected by stratified two stage random sampling technique. The whole urban area of Allahabad city was divided into two geographical strata and within each stratum a sample of two urban wards was selected at random as first stage units. Each of four selected first stage units was further divided into four geographical quadrants. Within each selected first stage unit a sample of 40 were selected at random covering 10 elderly (5 males and 5 females) from each quadrant.

In this way a representative sample of 160 respondents were included in the survey.

Respondents who were willing to participate in the study were interviewed for collecting information on some socio-demographic characteristics such as age, caste, religion, socio-economic condition, living arrangements etc, and health status. They were also asked about their perceptions regarding psycho-social parameters like feeling about family members, attitude of family members towards them, participation in social activities, feeling of psycho-social stress etc. were also asked. Anthropometric measurements (height and weight) were taken with maximum accuracy to the extent possible for community surveys in order to calculate Body Mass Index (BMI) for assessing nutritional status. Modified Prasad's classification adjusted with current income levels was used to assess socioeconomic status (SES).⁵ Data were analyzed using descriptive statistics, normal test of significance, odd ratios along with their respective 95% confidence intervals were used for investigating risk factors of psycho-social stress feeling. Statistical Programmes for Social Sciences (SPSS) package version 10.0 was used for data analysis.

Results

Socio-demographic characteristics of respondents are presented in Table 1. Majority of respondents (61.2%) belonged to 60-69 years age group, enjoying high socio-economic status (45%), occupants of joint families (60%) with household size ranging between 5 to 8 (52.5%) residing in spacious and ventilated houses (67.5%) and represented all occupational categories. The degree of educational attainment was quite high and 132 (82.5%) respondents were literate. About 40% respondents were having at least graduate degree. Among all respondents, 128 (80.0%) were walking regularly, 48 (30.0%) were doing some exercises. Gender-wise psycho-social factors are presented in Table 2. Only 28 (17.5 %) respondents were spending lonely lives and remaining 132 (82.5%) were living either with spouse or children. Males were more likely to live with spouse or children. Living arrangement of respondents showed that only 94 (58.7%) lived with their children. Proportion of males (75.0 %) living with children was more as compared to that for females (42.5%). Sixty percent males were living with their spouses as compared to (47.5%) such females. Among 132 respondents living with either spouse or children, 48 (36.4%) were not satisfied with

Table 1: Distribution of respondents according to background characteristics

Characteristic	Number (N=160)	Percentage
Age		
60 – 69	98	61.2
70 – 79	48	30.0
80 – 89	14	8.7
Mean ± SD	67.65±7.43	
Literacy level		
Illiterate / Just literate	28	17.5
Below 8 th	36	22.5
High school	24	15.0
Intermediate	8	5.0
Graduate	38	23.7
Post graduate	26	16.2
Occupation		
Housewife	68	42.5
Retired	74	46.2
Business	12	7.5
Others	6	3.7
Socio-economic status		
High	72	45.0
Middle	52	32.5
Low	36	22.5
Family type		
Nuclear family	64	40.0
Joint family	96	60.0
Household size		
1 – 4	54	33.7
5 – 8	84	52.5
>9	22	13.7
House locality		
Congested	52	32.5
Spacious and airy	108	67.5
Activities*		
Exercise	48	
Cycling	28	17.5
Regular walking	128	80.0
Cooking	16	10.0
Household work	88	55.0

*Multiple response

the attitude of their family members towards them. Satisfaction was less among females (50.0%) as compared to that among males (76.5%). Only 74 (56.1%) respondents living with either their spouse or children were playing their role in family decision-making. There was no significant difference ($P>0.20$) between proportions of males and females taking part in family decisions. Majority of respondents (82.5%) were not involved in any social activity. Even then, a larger proportion (87.5%) felt satisfied with the attitude of society towards them. Males were more likely to

participate in social work (27.5% Vs 7.5%) whereas, overall feeling of happiness was found comparatively more among females (67.5% Vs 27.5%). Overall 84 (52.5%) respondents were unhappy with the general situations and 62 (38.7%) were currently feeling psycho-social stress. Feeling of psychosocial stress was more among males (42.5%) as compared to that among females (35.0%).

Table 3 shows the morbidity profile of the elderly at the time of survey. Among all respondents, 126

Table 2: Psychosocial factors by gender

Factor	Male (N=80)		Female (N=80)		Total (N=160)	
	No.	%	No.	%		
Living status						
With spouse	48	(60.0)	38	(47.5)	86 (53.7)	
With children	60	(75.0)	34	(42.5)	94 (58.7)	
Alone	12	(15.0)	16	(20.0)	28 (17.5)	
Attitude of family members*						
Satisfactory	52	(76.5)	32	(50.0)	84 (63.6)	
Not satisfactory	16	(23.6)	32	(52.0)	48 (36.4)	
Partnership in family decision*						
Yes	38	(55.9)	36	(56.2)	74 (56.1)	
No	30	(44.1)	28	(43.8)	58 (43.9)	
General feeling						
Happy	22	(22.5)	54	(67.5)	76 (47.5)	
Unhappy	58	(72.5)	26	(32.5)	84 (52.5)	
Social feeling						
Satisfactory	68	(85.0)	72	(90.0)	140 (87.5)	
Not satisfactory	12	(15.0)	8	(10.0)	20 (12.5)	
Involvement in social activity						
Yes	22	(27.5)	6	(7.5)	28 (17.5)	
No	58	(72.5)	74	(92.5)	132 (82.5)	
Feeling of psychological stress						
Yes	34	(42.5)	28	(35.0)	62 (38.7)	
No	46	(57.5)	52	(65.0)	98 (61.2)	

*Among respondents living with either spouse or children only

Table 3: Morbidity status by gender

Morbidity	Gender				Total(N=160)	
	Male (N=80)		Female (N=80)		No.	%
	No.	%	No.	%		
Obesity (BMI >25)	22	(27.5)	29	(36.2)	51	(31.9)
Dental problems	24	(30.0)	28	(35.0)	52	(32.5)
Joint problems	28	(35.0)	42	(52.5)	70	(43.7)
Heart problems	14	(17.5)	18	(22.5)	32	(20.0)
Diabetes	14	(17.5)	8	(10.0)	22	(13.7)
Cataract	22	(27.5)	14	(17.5)	36	(22.5)
Urinary problems	10	(12.5)	0	(0)	10	(6.2)
Asthma / Bronchitis	4	(5.0)	2	(2.5)	6	(3.7)
Anaemia	4	(5.0)	4	(5.0)	8	(5.0)
Hearing problems	14	(17.5)	0	(0)	14	(8.7)
Gynec. problems	0	(0)	2	(2.5)	2	(1.2)
Others problems	12	(15.0)	18	(22.5)	30	(18.7)
No problem	18	(22.0)	16	(20.0)	34	(21.2)

(78.8%) had some kind of health problem. Joint problems were found to be the most prevalent (43.7%) among males (35.0%) and females (52.5%). Other major health problems included dental problems (32.5%), cataract (22.5%) heart problems (20%), diabetes (13.7%), obesity (BMI >25) 51 (31.9%), hearing problems (8.7%) etc. Males were more likely to suffer from diabetes, cataract, urinary problems, hearing problems and bronchitis as compared to females. Prevalence rates for joint problems, dental problems, obesity and heart problems were higher in females as compared to males.

Risk factors of psycho-social stress are presented in Table 4. Feeling of loneliness, unfavourable attitude of family members, negative feeling of respondents towards family members, non participation in family decisions, non involvement in social activities were found to be significant risk factors of psycho-social stress feeling. General health problems, obesity were not found to be significant risk factors (P>0.10) for creating feeling of psycho-social stress among respondents.

Discussion

The present study provides a comprehensive analysis of psycho-social problems of Indian elderly. Among all study subjects, 17.5% respondents were found to spend lonely lives. About 36% respondents living with their family members were not satisfied with the attitude of family members towards them. Females were less likely to be satisfied with the attitude of family members even than they were more likely to feel happy with the general situations. Larger proportion of males were participating in social activities as compared to females. Proportion of males feeling psycho-social stress were more as compared to that among females.

Only 58.7% respondents lived with children,

which is an alarming finding with the changing social structure. Children alone cannot be blamed for this low percentage as they might have their own compulsions and situations, which do not allow them to live with their parents. Majority of women were housewives having no independent source of livelihood and only 47.5% female respondents were living with their spouses making situations more miserable for them as single females are likely to suffer more problems in the society. Several studies from south Asia have shown that absence of spouses is likely to have more severe consequences for women than men.⁶⁻⁸

Factors like non-participation in family decision-making, non involvement in social activities, non-cooperative attitude of family members, negative feeling of family members towards respondents, general unhappy feelings, changing attitude of family members towards respondents, dissatisfactory relationships of family members with respondents etc. reflect rapidly changing social structure deviating from deeply rooted Indian culture. Several factors including changing lifestyle, adopting western culture, busy work schedule, lack of traditional norms and values of Indian culture and generation gap etc. might be attributed to these conditions. Family members may also have their own justifications of such changes in their attitude. Growing urbanization and migration due to economic reasons may also be reasons behind such changes. There is lack of available literature to comment on such issues.

In the present study an overall prevalence of elderly sick persons suffering from at least one health problem was found to be 78.8%. A recent study conducted in Nepal reported this prevalence to be 70.7%.⁴ No gender differential for prevalence of health problems was observed in the present study and only type of problems

Table 4. Risk factors of psychosocial stress feeling.

Factor	Odds Ratio (OR)	95% CI (OR)	P-Value
Dissatisfactory relationship with family members	6.40	1.97-21.5	P<0.001
Non-cooperative attitude of family members	4.33	1.32-14.61	P<0.01
Negative feeling of respondents towards family	6.36	1.75-24.30	P<0.001
Non-participation in family decisions	3.26	1.13-9.58	P<0.05
Loneliness	2.14	0.58-7.99	P>0.10
Non-participation in social activity	1.73	0.43-7.39	P>0.10
General morbid condition	1.69	0.47-6.31	P>0.10
Obesity	1.30	0.26-6.30	P>0.10

varied with gender. Joint problems, obesity, dental problems, cataract, heart problems and diabetes were some common health problems observed in the present study. In some studies visual, physical and hearing disabilities are reported as major age-related morbidities both in rural and urban populations.⁹⁻¹¹ Joint problem was found to be the most prevalent morbidity condition in the present study while in a recent study conducted in Chandigarh, anaemia was reported to be the commonest morbidity among elderly.¹² In a study conducted among rural elderly in Amritsar, arthritis was the commonest cause of illness in 60.6% followed by visual impairment in 54% individuals.¹³ The prevalence (31.9%) of obesity (BMI > 25) in the present study agree with the prevalence (33.14%) of obesity among elderly persons above 65 years of age in Chandigarh.¹⁴ Prevalence of cataract in the present study is found to be only 22.5% as compared to 67.4% in that study. Joint problem was more in the Delhi based elderly of both sexes (79.2% in females; 60.7% in males) than that observed by present study.¹⁵ The prevalence of dental problem in males and females in this study is, however, significantly higher than similar figures in other studies. None of female elderly had any urinary problem in our study. Spectrum of chronic morbidity among elderly shows regional differences. Rapid demographic transition without a concomitant epidemiological transition may be responsible for the dual load of infections and degenerative diseases among elderly.

The study indicates changes in the deep-rooted Indian culture as reflected from major risk factors of psycho-social stress feeling among elderly. Stress was felt more due to family problems rather than due to ill health of respondents. Elderly persons probably accepted their morbid conditions easily as inevitable but they find it difficult to adapt themselves with rudeness and negligence of family members. They can also accept easily deprivation from participation in social activities but felt stress due to non-fulfilment of their expectations from family members.

This study has several implications related with policy and practices related with health problems of elderly. Findings of the present study are not only helpful in developing strategies to reduce health problems but also addresses several issues related with their psycho-social conditions. Elderly irrespective of their socio-economic and other conditions suffer from psycho-social problems associated with rapid changes of values in Indian communities. Experts from

clinical medicine, community health experts, sociologists, psychologists, and community representatives should develop strategies jointly. A mechanism capable of taking care of elderly by their family members coping with other constraints simultaneously is desirable. The concept of joint family should be maintained as far as possible to avoid loneliness. Elderly persons should also be educated to cope with the new situations and to adjust with new generations. Social services/gatherings can be helpful in reducing old age problems. Social workers have to accept these challenges to overcome obstacles in their task of welfare of elderly. Promotion of healthy lifestyle in terms of yoga, meditation may also be a good idea.

Clinicians should develop some strategies to identify their health problems along with probable solutions. Initiation of geriatric clinics is a fruitful concept in this direction. Elderly persons attending clinics for their health problems should also be inquired about psycho-social conditions. Health policies should incorporate some psycho-social interventions to protect overall health status of elderly.

The study suggests that health problems of elderly should be tackled with some psycho-social interventions. There is a need to protect and promote healthy traditions and values of Indian culture by developing good intra-familial and social relationships. Some more social security schemes and rehabilitative measures should also be undertaken for the welfare of elderly. Both government and non-government organisations should work together for reducing problems of elderly.

Key Messages

- Health problems of elderly should be tackled with psycho-social intervention.
- Healthy traditions and values of Indian culture should be protected and promoted by developing good intra-familial and social relationships.

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References

1. Epidemiology and prevention of cardiovascular diseases in elderly. WHO Tech. Report series, 1995:853.

2. United Nations World Population Prospects: The 2002 Revision (NY, 2003).
3. Estimates prepared by the population and social international Section, Emerging based on available data. UN Demographic yearbook, Special ESCAP Edition (New York, 2002)
4. Chalise HN, Shreshta S. Situation of the elderly in the Himalyan kingdom of Nepal. *Ind J of Social Work* 2005; 66:136-143.
5. Kumar P. Social classification - Need for constant updating. *Indian J Community Med* 1993; 18: 60-61.
6. Bhatt MPN. Widowhood and Mortality in India. In MA Chen (ed.). Widows in India: Social neglect and public action, New Delhi. Sage Publication 1998.
7. Rahman MO. Living arrangement and the health of older persons in less developed countries: Evidence from Rural Bangladesh. Paper presented at the Technical Meeting on population ageing and living arrangement of older persons: Critical issues and policy responses, New York 2000.
8. Sengupta M, Agree EM. Gender and disability among older adults in North and South India: Differences associated with co-residence and marriage. *J Cross-cultural Geront* 2002; 17:313-336.
9. Shah B, Prabhakar AK. Chronic morbidity profile among elderly. *Indian J Med Res* 1997; 106:265-272.
10. Mohan M. Survey of blindness in India (1986-89): Summary results In: Present status of national programme of control of blindness. Directorate of Health Services, Ministry of Health & FW, New Delhi, 1992; 80-100.
11. Venkatorao T, Ezhil R, Jabbar S, Ramakrishnan R. Prevalence of disability and handicaps in geriatric population in rural south India. *Indian J Public Health* 2005; 49:11-17.
12. Sharma MK, Swami HM, Gulati Rr, Bhatia V, Kumar D. Life style and morbidity profile of geriatric population in urban area of Chandigarh. *Journal of the Indian Academy of Geriatrics* 2005; 3:122-125.
13. Padda AS et al. Health profile of aged persons in urban & rural field practice areas of Medical College, Amritsar. *Indian J Community Med* 1998; 23:72-76.
14. Swami HM, Bhatia V, Gupta AK, Bhatia SPS. An epidemiological study of obesity among elderly in Chandigarh. *Indian J Community Med* 2005; 30:11-13.
15. Khokkar A, Mehra M. Lifestyle and morbidity profile of geriatric population in an urban community of Delhi. *Ind J Medl Sci* 2001; 55:609-615.

Health Status of Retired Elderly Across Different Age Groups

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Abstract

This field study was carried out on 390 elderly across three colonies of Delhi representing three distinctive groups i.e. high (group A), middle (group B) and low economic (group C) group. Using house-to-house survey method and electoral, a list of retired elderly was prepared for each colony. From this list a sample of retired elderly, 130 from each group was taken using simple random technique. Data was collected using interview schedule. Major findings revealed that more than half of the retired elderly were living life with longer leisure time but felt depressed. About 1/4th people had rated their health as good and more than 3/5th so-so (70%). Irrespective of sickness, less than 1/5th perceived it to be bad and 0.8% were incapacitated. Disease with which elderly suffered most were vision (66.41%), followed by arthritis (65.38%), hypertension (41.28%). Hypertension was found to be more in elderly of 60-80 years old, followed by diabetes and cardiac diseases. 1/10th of retired elderly had limitation in their outdoor activities; few (5.1%) had limited indoor activities and 3.3% had limited activities of daily life. Major conclusion of the study is that retired elderly were mostly mobile and healthy, having a longer leisure time. Those who were always idle suffered episodes of depression and elderly who kept themselves involved in activities had a positive impact on their health.

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Introduction

Old age is a growing section of our population and simultaneously it flashes images of miseries. Elderly and aging are two different concepts, one refers to a section of population and other one is a process of becoming old. The period of onset of aging is scientifically difficult to define. Impression is that it is deeply conditioned with contours of the country, region, and culture. A wide variation in the longevity across the world speaks that biological processes of aging has interaction of social, cultural, and climatic forces that determine different images of old age cross culturally. The secret of healthy aging lies in scientific understanding of these forces and managing them by scientific interventions.¹ Given the trends of population

ageing, the older population faces a number of problems ranging from absence of sufficient income to support themselves, loss of social role and recognition to ill health. In India 75% of aged individuals are afflicted by a physical disability (vision, hearing locomotors, speech and senility).² The most common chronic conditions include joint problems (72%), cough (38.2%), hypertension (33.2%), psychosocial problems which includes breakdown of extended family, feeling of isolation, loneliness, anxiety, depression, dementia etc. and other social problems of the elderly which include isolation, loss of position, authority, responsibility and opportunities for social interaction, migration etc.^{3,4} In the Indian context, the human life span is divided into four ashramas - bramacharya (life of a student), grahasthya (life of a householder), vanaprastha (life of a forest dweller) and sanyasa (ascetic). This philosophy of life when practiced prepared a person for a calm inward looking and peaceful old age. Over the time such values have been deteriorating and in modern India, old age is increasingly being perceived as a resource to contribute to the society and nation more than self salvation.⁵

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Analyzing the condition of older people in India, it may be concluded that the Indian tradition that used to provide satisfaction in old age has changed. Thus the changing social situation is reducing life satisfaction of the older persons.⁶ Many elderly people successfully adapt to the multiple challenges presented by old age but such successful adaptation is not always the case. The consequences of failure to adapt are diverse, and include psychological and behavioral disorders, as well as the worsening of health, functional and physical deterioration. The major load has shifted from rural to urban and we will have literary elders more than illiterate elders in coming years so ignoring their needs would be more difficult than what we find it today.⁷

Rationale of study Following were the main rationales to propose for this study.

n *Firstly, some studies have reflected that a substantial percentage of retired people possess a strong desire for serving the society and nation, which is an unfulfilled desire.*

n *Secondly, involvements into socially productive activities delays their ageing process and add to healthy ageing.*

n *Thirdly, involvement into socially productive activities help elderly to come out of their loneliness, depression, anxiety and other emotional and social problems.*

Objective:

To find out the pattern of disease across different age group of elderly.

Material & Methods

Sample design

Out of ten urban zones of Delhi, one zone was selected randomly. From selected zone, one ward was selected by using simple random technique for the

study purpose. Under the Unit Area Method of Property Tax assessment, municipal corporation of Delhi (MCD) had classified colonies from A to G categories. "A" category represented highest side of property and G represented lowest side property. Based on this classification, three colonies of different types were selected from the selected ward. Electoral roll of each selected colony was taken from internet. List of elderly, more than 60 years of age, was prepared from the electoral roll. By using house-to-house survey method, a list of retired elderly was prepared for each colony. Sample of retired elderly, equal in number i.e. 130, taken from the selected three different colonies by using simple random technique. Out of three colonies, colony of highest type was labeled as group A, less high as group B and of lowest type as group C.

Tools and Technique

Interview schedule was utilized as data collection tool to achieve the objectives of the study.

Pre Testing

The schedule so prepared was subjected to pre testing amongst a total of 45 elderly- 15 from each of the three different categories of residential colonies.

Results & Discussion

Logical efforts were made to first study the health of retired elderly on some dimensions and to find out the common diseases with which they were suffering. Elderly who suffered with depression quite often were interviewed and the responses are given in Table 1.

As evident from Table 1, greater than half of the total respondents were of the opinion that occurrence of depression was more in individuals having longer leisure time (55.4%) followed by those persons who were always idle and demanding in nature. From health point of view, it is a vital information and confirms popular belief that those who are busy in

Table 1: Occurrence of depression and engagement into activities (N=390)

Availability of time	Frequency	Percentage
All those who are always engaged	4	1.0
Those having longer leisure time	216	55.4
Those who are always idle & demanding	170	43.6

Table 2: Health as perceived by elderly (N=390)

Perception	Frequency	Percentage
Good	90	23.1
So-So	273	70
Bad	24	6.2
Incapacitated	3	0.8

activities hardly suffer from depression. So if health authorities desire to promote good health amongst old people, it has to come out with activities/plans to create opportunities to remain busy.

One of the major findings was idleness and demanding in nature being the most predominant behavior. The share of those having longer leisure time was equally more predominant feature. The implication of such life style however was not the major thrust of the study. Nevertheless it appears that the root of the problem among the elderly lies more in the life perspective and the life style after retirement. The experience showed that expected behavior of family members before and after retirement may vary. It is quite possible that family members would expect more involvement of retired elderly in household activities as well as engagement into some socially productive activities. This presents an important case of pre retirement planning to spend time in the family. In states like Karnataka this has been initiated with the help of government support and experience is that it benefits a lot to the elderly directly as well as their families.⁸

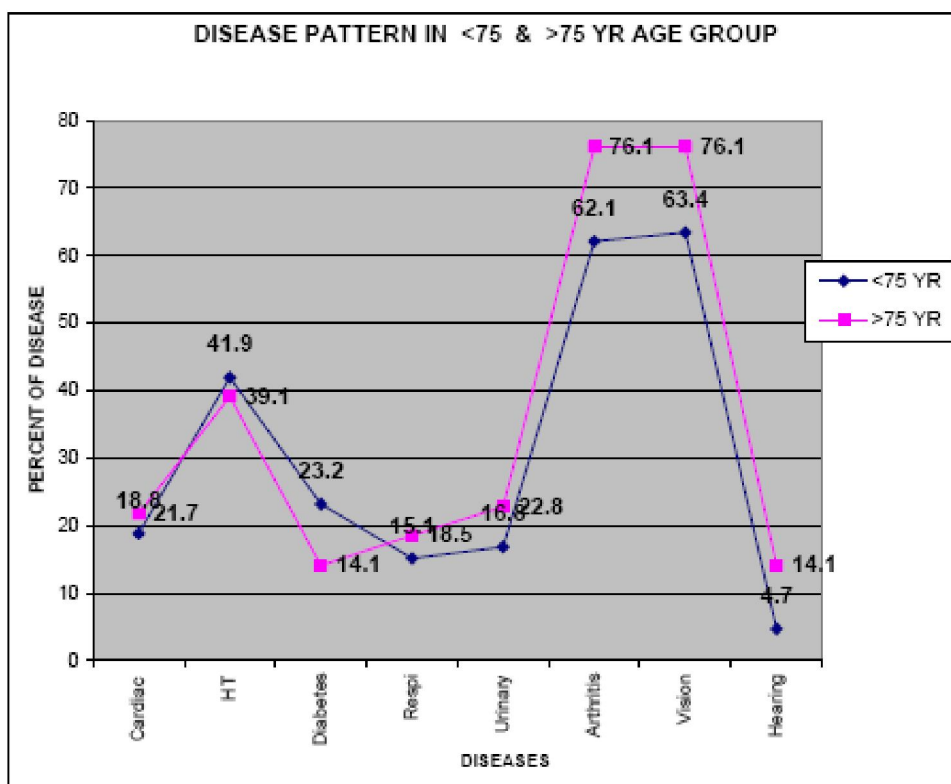
In order to find out the self-rated health of retired elderly, two measures were used; first was to present list of diseases and were asked to find out the disease with which they were suffering. Second measure was to collect record (i.e. prescription, diagnostic test reports, and the treatment). This measure was used to validate the reporting methods, the reliability between reported disease and the treatment record was calculated and it was near 99 percent. This reliability can be scientifically used for the validity of rapid screening method for diseases.

Old age is normally viewed as synonym of diseases. As per National Sample Survey (NSS) 1991 with regard to selfassessment of health status, it was found that around two-thirds of the elderly reported to be fairly all right as against 10% reported as unhealthy in surveyed elderly. According to NSS 60th round estimating the state of self perceived health status of older people, good or fair condition of health was reported by 55-63% of people with a sickness and 77-78% of people without one. Such perception of health problem of elderly is supported by findings from the Table 2. Questions were asked and subjects were required to rate their health on fourpoint scale i.e. good, so-so, bad and incapacitated. Findings revealed that around 70% people had rated their health as so-so (neither good nor bad) irrespective of sickness, 23.1% as good, 6.2% perceived it to be bad and 0.8% as incapacitated. However, what is the notion of fairness in the mind of elderly is not fully known.

Table 3: Disease profile (n=390)

Diseases	Diseases identified based on symptoms		Diseases identified based on records	
	Freq.	Percent	Freq.	Percent
Cardiac	76	19.49	68	17.44
Hypertension	161	41.28	155	39.74
Diabetes	82	21.02	80	20.51
Respiratory	62	15.90	52	13.33
Urinary	71	18.21	52	13.33
Central nervous system	8	2.05	8	2.05
Neoplasm	2	0.51	2	0.51
Arthritis	255	65.38	163	41.79
Vision	259	66.41	185	47.44
Hearing	27	6.92	7	1.79

Graph 1



Data on health profile was collected using tool of rapid screening of diseases developed by structured schedule.⁹ It contains a list of 22 diseases. These diseases were arranged according to medical classification. Prominent symptoms were listed against the diseases. Once information about diseases was recorded, then respondents were asked to produce any medical records of investigation and treatment with a view to find out whether such measure would be valid.

It was evident that these measures were highly valid for generating data on diseases amongst elderly persons or for any group (Table 3). The common diseases observed in these patients were vision problems (66.41%) followed by locomotive arthritis (65.38%), hypertension (41.28%). However, this issue was not clear whether diseases are more prevalent in young-old or old-old. In this context worldwide review of literature suggests a relatively speedy vulnerability in term of ageing morbidity and medical care and dependency as the age advances, so subsequent analysis was carried for total sample.

In a study of urban elderly in Gujarat by Shah et al, it was found that deteriorating physical conditions

among two-thirds of elderly was in terms of poor vision, hearing handicap, arthritis, and loss of memory.¹⁰

The analysis was done at different steps. At the first step, frequency distribution of diseases was calculated by classifying sample in two broad categories of age. The effort was further made to analyze the disease profile across three classified groups, which were known as youngold, old-old and oldest old. This categorization is widely used in the existing Indian literature from different disciplines including national policy of older persons. This was done with purpose to find out whether any disease has relationship with growing age, how elderly perceive their health and relationship with activities.

All these groups were classified in two main groups, with 75 years taken as cut off point. It is postulated that the ageing around 75 years becomes faster. Indication comes from few research conducted in the developed nations. Just to find out whether some significant trend emerges, analysis was carried out and, the results are given in the Table 4. Stress related diseases like hypertension and diabetes were found to be more in group I in comparison to group II. However, no such difference was noted for cardiac

Table 4: Diseases reported

Diseases reported	<75year (N=298)		>75 year (N=92)	
	f	%	f	%
Cardiac	56	18.8	20	21.7
Hypertension	125	41.9	36	39.1
Diabetes	69	23.2	13	14.1
Respiratory	45	15.1	17	18.5
Urinary	50	16.8	21	22.8
Central nervous system	3	1	5	5.4
Neoplasm	2	0.7	0	0
Arthritis	185	62.1	70	76.1
Vision	189	63.4	70	76.1
Hearing	14	4.7	13	14.1

Table 5: Diseases reported by all age groups

Diseases reported	60-70yr (N=194)		71-80yr (N=160)		80+yr (N=36)	
	f	%	f	%	f	%
Cardiac	25	12.9	42	26.3	9	25
Hypertension	72	37.1	72	45	17	47.2
Diabetes	45	23.2	33	20.6	4	11.1
Respiratory	21	10.8	29	18.1	12	33.3
Urinary	26	13.4	38	23.8	7	19.4
Central nervous system	2	1	3	1.9	3	8.3
Neoplasm	2	2	0	0	0	0
Arthritis	115	59.3	110	68.8	30	83.3
Vision	112	57.7	119	74.3	28	77.8
Hearing	3	1.5	17	10.6	7	19.4

diseases. The reasons need to be explored further. Ageing related diseases like central nervous system disorders, arthritis, vision impairment and hearing impairment, the findings were very clear and significant.

Among stress related diseases, hypertension was found to be more frequent in elderly of 60-80 years old, followed by diabetes and cardiac diseases. Arthritis, visual problems, hearing problems, respiratory diseases, and urinary problems were found to have increasing trend with the increase in age. Similarly in the 52nd round of sample survey reported, visual impairment (25- 27%), hearing deficit (12-14%) to be most frequent.³

Majority of retired elderly were completely mobile. Less than 1/10th were confined to house and only 0.8% were confined to bed. Similarly the latest round of survey (60th) reported that about 8% of older Indians were confined to their home. Around 1/10th of retired elderly have limitation in their outdoor activities; few (5.1%) had limited indoor activities and 3.3% had limited activities of daily life.

There was significant relationship between cardiac diseases, diabetes, urinary diseases, central nervous system diseases, neoplasm and highly significant relationship with arthritis, visual problems and hearing problems and age of the elderly. Similar results were also found in a cross-sectional survey carried out by

Table 6: Mobility status & activities limitation (N=390)

Mobility status	Frequency	Percent
Confined to bed	3	0.8
Confined to house	35	9
Completely mobile	353	90.5
Limitation in activities of daily life		
Indoor activities	13	3.3
Outdoor activities	20	5.1
	63	16.2

Table 7: Relationship (correlation coefficient) between diseases and age

Diseases (1=present,0=not present)	Age
CVS	0.116*
Hypertension	0.036
Diabetes	0.068*
Respiratory	0.029
Urinary	0.109*
CNS	0.119*
Neoplasm	-0.104*
Arthritis	0.14**
Vision	0.173**
Hearing	0.147**

*Significant at 0.05 level

** Significant at 0.01 level

Joshi et al in Chandigarh city and the rural population of Haryana.¹¹ According to the study morbidity was significantly associated with age (b value 0.06, 95% CI: 0.01, 0.12), sex (b value 1.03, 95% CI: 0.02, 2.05), age-wise, higher mean morbidity was noticed in the 73–84 year age group (P < 0.001). Elderly people from the rural area (P < 0.001), those unmarried and divorced (P < 0.001), had higher levels of morbidity. Lower education was consistently observed with higher levels of morbidity (P < 0.001). In the rural area, 93% of elderly subjects had more than three morbidities compared with 73% in urban area (x² = 13.0, P < 0.01). Study observed means of 5.9 (SD 3) and 6.4 (SD 2.8) morbidities in males and females, respectively.

Conclusion

This study concludes that majority of retired elderly perceived their health as so-so, one can infer that disability was less as generally believed. Majority of retired elderly were completely mobile. There was

a positive correlation between cardiac diseases, urinary diseases, central nervous system diseases, arthritis, visual problems and hearing problems and age of the elderly. All the retired elderly had a longer leisure time and those who were always idle and demanding suffered a lot with episodes of depression. Majority of elderly (90.5%) felt that keeping themselves involved in some or other activities affected their health positively.

Stress related diseases such as hypertension and diabetes were relatively more prominent in <75-year-old elderly. It appears that in the young-old group, it is usually vigorous in comparison to elderly >75 year. One of the reasons could be idleness, loneliness and non-productive lifestyle. Therefore, it is strongly suggested that all those associated with ageing come out with concrete programs and policies particularly for the young-old addressing idleness and loneliness. It is strongly suggested that the Government should come out with a national programme for arthritis and hearing loss.

References

1. Khan, A.M. Managing mindset of Young & Old: Healthy Ageing. *Ind J Geront* 2003; 17:189-196.
2. NSSO (1998). The aged in India: A socioeconomic profile. NSS 52nd Round, July 1995-June 1996, Report no.446 (52/25.0/3).
3. NSSO (1995-1996). The Aged in India, A Socio economic profile, National Sample Survey 52nd round, Department of Statistics, Government of India, 1998
4. Shanthi J J, Aleisha S B A, Irudaya R. Promotion of Healthy Aging in the Context of Population Aging Phenomenon in India. *Indian Journal of Gerontology* 2005; 19: 181-192.
5. Khan A. Ageing in health, retrospect and prospect, empowerment of elderly, source of healthy ageing, *Indira Jai Prakash*, 2005; pp 139-151.
6. Kohli AS. Social situation of the aged in India. New Delhi; Anmol publication 1996.
7. Siva Raju S. Economic Issue of Elderly in India, Harmony Publication 2004.
8. Jaiprakash I. Ageing in India, retrospect & prospect, proceeding of National Conference on Ageing and National Development 2006.
10. Khan AM, Smita. Case studies of elder abuse- roots and bases of intervention, *Journal of the Indian Academy of Geriatrics* 2006; 2:21-27.
11. Shah, VP. The elderly in Gujarat, Ahmedabad. Gujarat University, 1993.
12. Joshi K, Kumar R, Avasthi A. Morbidity profile and its relationship with disability and psychological distress among elderly people in northern India. *International J Epidemiology* 2003; 32:978-987.

A Study of Electrolyte Imbalance in Hospitalized Older Patients

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Introduction

The process of ageing brings about a series of post-maturational biological changes leading to alteration in the functions of all organ systems in the body. Though in older subjects health is maintained in basal state, yet they fail to cope with stress of acute illness or injury and several metabolic abnormalities become manifest. The restriction of renal functions, thirst mechanism and loss of body fluids reduce the adaptability of the fluid electrolyte balance. The internal milieu is also disturbed by the ageing process and compensatory phenomenon attempt to rectify the alterations. Small derangements in function bring about a larger demand on the adaptive and the restorative components and can lead to deleterious effects in older patients though they may not be noticed in a physiologically sound robust individual.¹⁻⁵ The common electrolyte imbalances encountered in clinical practice include that of sodium, potassium and water.

Hyponatremia is the most extensively studied and investigated electrolyte imbalance.^{6, 7} Several factors contribute to presence of hyponatremia in older persons including leakage of sodium into cells during acute illness, sodium depletion accompanying dehydration, diarrhea, vomiting or diuretic therapy, cardiac or hepatic failure. Minor disturbances could also be due to age related changes in antidiuretic hormone (ADH), angiotensin plasma renin activity, and renin angiotensin aldosterone axis. Derangement in

magnesium and calcium alone or in combination with sodium and potassium may contribute to modifying the clinical course and symptoms of illness.

Pre-existing medical illness in older persons like coronary artery disease, congestive heart failure, chronic obstructive airway disease, diabetes mellitus as well as the therapeutic agents used for these conditions have the potential to cause life threatening electrolyte disturbances. The present study was carried out to evaluate electrolyte status in hospitalized older patients. The electrolyte changes in subjects with altered mental status were evaluated.

Methods

Sixty five consecutive patients over 60 years of age, hospitalized in the medical wards at All India Institute of Medical Science, New Delhi were included in the presents study. Initial evaluation included a detailed history specifically looking into drug therapy, past medical illnesses and physical examination with emphasis to elicit sings of dehydration, muscle weakness and altered sensorium. Investigations included a hemogram, blood glucose, kidney function, potassium, magnesium, calcium and phosphorous levels in blood along with serum and urine osmolality and arterial blood gas analyses at admission and at discharge. Other investigations like chest x-ray, ECG etc. were done to aid in the diagnosis and management wherever felt necessary.

Timely identification of electrolyte abnormalities always poses a challenge to the treating physician. Although Lowe's criteria have been described for prediction of clinically significant electrolyte abnormalities, but in the light of their poor specificity in identification of these disorders, actual measurement remains the cornerstone for diagnosis of electrolyte

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imbalance in clinical practice.⁸ For the purpose of our study, sodium and potassium were analysed by plasmaphotometry using Coring 480 flamophotometer with lithium used as the internal standard. Calcium was analyzed by a standardized colorimetric method using O-cresophthalin complexone (CPC) as color producing reagent and Boehringer Knoll 40/0 model spectrophotometer. Magnesium and phosphorous were estimated on multichannel fully automated chemistry analyzer (Hitachi 717 model). Molybdate was used as the reagent which leads to formation of phosphomolybdate whose absorbance is measured in the analyzer. Arterial blood gases were estimated on heparinized blood in a sealed capillary tube using blood gas analyzer.

Results

Of the 65 elder patients included in our study, majority were males. The age and sex distribution of these patients has been presented in Table 1.

This study was conducted at general medical wards of a super-specialty hospital and a large number of patients were suffering from respiratory system pathology. Chronic obstructive airway disease with (7) or without (5) respiratory failure was the commonest diagnosis followed by tuberculosis. Other causes identified included coronary artery disease, cerebrovascular accident, diabetes, hypertension etc. Similarly, bronchodilators were the most commonly prescribed drugs to the subjects under study, a third of whom took steroids also. Diuretics, calcium channel blockers and angiotensin converting enzyme inhibitors were the other commonly used medications. Four of the 65 patients had malignancy.

The common electrolyte abnormalities identified at admission was hypocalcemia in 35 (53.85%), hyponatremia in 21 (32.31%), hypokalemia in 19 (29.23) and hypercalcemia in 3 (4.62%) patients. Most patients had multiple electrolyte disturbances. The urinary excretion of sodium was within the normal

range though potassium excretion was much below normal range. However, there was no significant difference in serum and urine electrolytes between males and females as has been proposed by Baglin et al who attributed this difference to a higher proportion of females taking diuretics in their study.⁹ Blood gas parameters revealed variations consistent with the diagnosis of chronic obstructive airway disease with or without respiratory failure.

Most patients with altered mentation presented with irritability, confusion or coma. Varying grades of coma were observed in 16 (24.62%) patients as evidenced by an altered mini mental status examination score, of whom only 5 had a cerebrovascular accident. Eleven patients had metabolic causes including electrolyte imbalance. Twenty seven percent of patients complained of muscle weakness and had altered muscle tone on examination which can be attributed to frailty or possible electrolyte disturbance. Stroke and carbondioxide retention due to respiratory failure were the most important causes of this altered consciousness. Also a significant correlation ($p < 0.01$) was observed between abnormalities of calcium metabolism and alteration in consciousness.

Discussion

Respiratory diseases contributed to 61.5% of the diagnoses with chronic obstructive airway disease as the most common. Other significant diagnosis included malignancy, stroke, coronary artery disease accounting for around 10% cases each. Hypertension was the commonest co-existent disease in as many as 30% patients. Elisaf et al have reported a prevalence of electrolyte disorders in the hospitalized older patients around 22.2%.¹⁰ However, we find a higher prevalence of electrolyte abnormalities in our patients making the issue even more relevant to Indian settings.

The reduced urinary excretion of potassium and sodium in asymptomatic older subjects has been reported previously by Kirkland et al.¹¹ We find that

Table 1: Age and sex distribution in 65 patients with electrolyte disorder

Age	Male (n = 50)	Female (n = 15)	Total (n=65)
60-69 yr	29 (58%)	8 (53.33%)	37
70-79 yr	19 (38%)	6 (40%)	25
80 yr and above	2 (4%)	1 (6.66%)	3

potassium excretion was significantly lower in hospitalized older subjects though sodium excretion was maintained within normal range. This decrease in potassium excretion in urine is probably an exaggeration of the normal decline that occurs as a part of a normal aging process.

During hospital stay four patients expired, three of whom had a malignant illness. One patient died of respiratory failure. The contribution of electrolyte imbalance in these deaths appeared to be marginal if any though previous studies have shown a linear relationship between the severity of dyselectrolytemia and intra-hospital mortality.

Chronic obstructive airway disease was the most common disease associated with electrolyte disturbances. This reflects the pattern of diagnosis in the study subjects and is partly due to the effect of β agonist bronchodilators, steroids and methylxanthines on electrolyte imbalance. Literature on these drugs supports the fact that β agonist bronchodilators have hypokalemic and hypocalcemic effect and steroids have profound effect on potassium, sodium and calcium metabolism, more so when administered for prolonged periods in therapeutic doses.

Most renal function indicators did not correlate with electrolyte except a linear correlation found between blood urea and serum potassium. Renal clearance of sodium was mostly normal, whereas potassium excretion was impaired which was probably due to the presence of clinical and sub-clinical respiratory failure in a large number of patients due to chronic obstructive airway disease.

Of the 16 patients hospitalized with altered consciousness, 11 had a metabolic cause for the alteration. Chronic obstructive airway disease with or without respiratory failure has been known to cause alteration in sensorium. There was no significant correlation between lack of consciousness and

electrolyte imbalance. Lack of correlation with electrolyte is probably due to widespread nature of electrolyte imbalance often remaining clinically silent when present for prolonged periods, or till other events trigger the patient past threshold for clinical symptoms.

References

1. Dietze F. Changes in electrolyte and water balance in old age. *Z Gerontol* 1991; 24:185-188.
2. Lye M. Electrolyte disorders in the elderly. *Clin Endocrinol Metab* 1984; 13:377-398.
3. Miller M. Fluid and electrolyte homeostasis in the elderly: physiological changes of ageing and clinical consequences. *Baillieres Clin Endocrinol Metab* 1997; 11:367-387.
4. Phillips PA, Johnston CI, Gray L. Disturbed fluid and electrolyte homeostasis following dehydration in elderly people. *Age Ageing* 1993; 22:S26-33.
5. Sica DA. Renal disease, electrolyte abnormalities, and acid-base imbalance in the elderly. *Clin Geriatr Med* 1994; 10:197-211.
6. Yamada K, Yoshida S. Electrolyte imbalance in the elderly. *Nippon Ronen Igakkai Zasshi* 1989; 26:210-215.
7. Miller M. Fluid and electrolyte balance in the elderly. *Geriatrics* 1987; 42:65-68, 71, 75-76.
8. Singal BM, Hedges JR, Succop PA. Prediction of electrolyte abnormalities in elderly emergency patients. *Ann Emerg Med* 1991; 20:964-968.
9. Baglin A, Prinseau J, Aegerter P, et al. Electrolyte abnormalities in elderly people. Prevalence and relation to drug treatment. Multicenter study of 631 subjects aged 70 years and over. *Presse Med* 1992; 21:1459-1463.
10. Elisaf MS, Milionis HJ, Siamopoulos KC. Electrolyte abnormalities in elderly patients admitted to a general medical ward. *Geriatr Nephrol Urol* 1997;7:73-79.
11. Kirkland JL, Lye M, Levy DW, Banerjee AK. Patterns of urine flow and electrolyte excretion in healthy elderly people. *Br Med J (Clin Res Ed)* 1983;287:1665-1667.

Fracture prevention with vitamin D supplementation: considering the inconsistent results

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BMC Musculoskeletal Disorders 2007, 8:26

Abstract

Background: A meta-analysis found that high dose vitamin D, different from low dose, decreased fracture risk by 23% for any nonvertebral fracture and by 26% for hip fracture. Unfortunately, however, this effect was not confirmed by recent trials. The aim of this paper is to explore if this inconsistency can be attributed to publication bias or heterogeneity of the trials.

Methods: The meta-analysis was extended with recent randomised controlled trials (RCTs) that were identified by a systematic review. Risk ratios (RR) and 95% confidence intervals (CI) were calculated from raw data. A funnel plot was used to explore the possibility of publication bias. Forest plots were used to investigate if vitamin D dose, concurrent use of calcium and target population were sources of heterogeneity. Linear regression analysis of log RR on adherence rate and achieved vitamin D level was used to study whether these variables were associated with fracture risk.

Results: A total of eleven trials was included: seven RCTs from the meta-analysis and four recently published. For any nonvertebral fracture, the funnel plot was asymmetrical because two small RCTs showed a large positive effect. This was not found for hip fracture. As reported in the meta-analysis, low dose vitamin D (<400 IU daily) was not effective. In contrast to the meta-analysis, however, the effect of high dose vitamin D (e"700 IU daily) seemed to be dependent on target population. For any nonvertebral fracture, the pooled RR was 0.80 (95% CI, 0.70–0.90) in institutionalised persons, and 0.88 (95% CI, 0.75–1.04) in the general population; for hip fracture, pooled RR 0.72 (95% CI, 0.59 to 0.88) and 1.04 (95% CI, 0.72–1.50), respectively. Other sources of heterogeneity were not clearly found. In the meta-analysis, pooled RRs were mainly based on small trials that showed a large effect or trials in institutionalised persons.

Conclusion: It is likely that the inconsistency between the meta-analysis and the recent trials is, at least partially, due to publication bias and differences in target population. High dose vitamin D may be effective in institutionalised persons but probably is not effective in the general population.

Identification of high-risk subgroups in very elderly intensive care unit patients

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Critical Care 2007

Abstract

Introduction: Current prognostic models for intensive care unit (ICU) patients have not been specifically developed or validated in the very elderly. The aim of this study was to develop a prognostic model for ICU patients 80 years old or older to predict in-hospital mortality by means of data obtained within 24 hours after ICU admission. Aside from having good overall performance, the model was designed to reliably and specifically identify subgroups at very high risk of dying.

Methods: A total of 6,867 consecutive patients 80 years old or older from 21 Dutch ICUs were studied. Data necessary to calculate the Glasgow Coma Scale, Acute Physiology and Chronic Health Evaluation II, Simplified Acute Physiology Score II (SAPS II), Mortality Probability Models II scores, and ICU and hospital survival were recorded. Data were randomly divided into a developmental ($n = 4,587$) and a validation ($n = 2,289$) set. By means of recursive partitioning analysis, a classification tree predicting in-hospital mortality was developed. This model was compared with the original SAPS II model and with the SAPS II model after recalibration for very elderly ICU patients in the Netherlands.

Results: Overall performance measured by the area under the receiver operating characteristic curve and by the Brier score was similar for the classification tree, the original SAPS II model, and the recalibrated SAPS II model. The tree identified most patients with very high risk of mortality (9.2% of patients versus 8.9% for the original SAPS II and 5.9% for the recalibrated SAPS II had a risk of more than 80%). With a cut-point at a risk of 80%, the positive predictive values were 0.88 for the tree, 0.83 for the original SAPS II, and 0.87 for the recalibrated SAPS II.

Conclusion: Prognostic models with good overall performance may also reliably identify subgroups of very elderly ICU patients who have a very high risk

of dying before hospital discharge. The classification tree has the advantage of identifying the separate factors contributing to bad outcome and of using few variables. Up to 9.5% of patients were found to have a risk to die of more than 85%.

Selective serotonin reuptake inhibitor use associates with apathy among depressed elderly: a case-control study

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Tinakon Wongpakaran and Diana Clarke

Annals of General Psychiatry 2007, 6

Abstract

Background: It has been reported for over the past decade that the use of selective serotonin reuptake inhibitors (SSRI's) may associate with the emergence of apathy. The authors hypothesized that depressed patients treated with SSRI's would show more signs of apathy than patients treated with non-SSRI antidepressants. This case control study was conducted to investigate the possibility of the association between SSRI use and the occurrence of apathy.

Methods: Baycrest Centre for Geriatric Care's Day Hospital Database of elderly depressed patients who received antidepressants was divided into 2 groups depending on antidepressant use at discharge: SSRI user group-SUG, and non-SSRI user group-NSUG. Apathy scales developed by the authors were selected from the Geriatric depression Scale (GDS) and the Hamilton Rating Scale for Depression (HAM-D), and were titled as GDS-apathy subscale (GAS) and HAM-D-apathy subscale (HAS). Demographic data, baseline apathy, underlying medical conditions and medication use were studied. Proportion, analysis of variances, Chi-square test, odds ratio with 95% confidence interval were reported.

Results: Among 384 patients (160 SUG and 224 NSUG), mean GDS and HAM-D at discharge were 12.46 and 10.61 in SUG, and were 11.37 and 9.30 in NSUG, respectively. Using GAS for apathy assessment, 83.7% of patients in SUG and 73.4% in NSUG stayed apathetic at discharge. As evaluated by HAS, 44.2% of patients in SUG and 36.5% in NSUG stayed apathetic. SSRI use was not a predictor of apathy at admission, while it was at discharge, $p = 0.029$. The SUG showed more patients with apathy than that found in NSUG (adjusted OR = 1.90 (1.14–3.17)). Age 70–75 years tended to be a predictor for the apathy ($p = 0.058$). Using HAS, age 70–75 years and living situation were associated with apathy at

discharge, $p = 0.032$ and 0.038 respectively.

Conclusion: Even though depression was improved in elderly patients receiving antidepressants, apathy appeared to be greater in patients who were treated with SSRI than that found in patients who were not. Frontal lobe dysfunction due to alteration of serotonin is considered to be one of the possibilities.

Maintenance treatment with esomeprazole following initial relief of non-steroidal anti-inflammatory drug-associated upper gastrointestinal symptoms: the NASA2 and SPACE2 studies

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Arthritis Research & Therapy 2007

Abstract: Non-steroidal anti-inflammatory drugs (NSAIDs), including selective cyclo-oxygenase-2 (COX-2) inhibitors, cause upper gastrointestinal (GI) symptoms that are relieved by treatment with esomeprazole. We assessed esomeprazole for maintaining long-term relief of such symptoms. Six hundred and ten patients with a chronic condition requiring anti-inflammatory therapy who achieved relief of NSAID-associated symptoms of pain, discomfort, or burning in the upper abdomen during two previous studies were enrolled and randomly assigned into two identical, multicentre, parallel-group, placebo-controlled studies of esomeprazole 20 mg or 40 mg treatment (NASA2 [Nexium Anti-inflammatory Symptom Amelioration] and SPACE2 [Symptom Prevention by Acid Control with Esomeprazole] studies; ClinicalTrials.gov identifiers NCT00241514 and NCT00241553, respectively) performed at various rheumatology, gastroenterology, and primary care clinics. Four hundred and twenty-six patients completed the 6-month treatment period. The primary measure was the proportion of patients with relapse of upper GI symptoms, recorded in daily diary cards, after 6 months. Relapse was defined as moderate-to-severe upper GI symptoms (a score of more than or equal to 3 on a 7-grade scale) for 3 days or more in any 7-day period. Esomeprazole was significantly more effective than placebo in maintaining relief of upper GI symptoms throughout 6 months of treatment. Life-table estimates (95% confidence intervals) of the proportion of patients with relapse at 6 months (pooled population) were placebo, 39.1% (32.2% to 46.0%); esomeprazole 20 mg, 29.3% (22.3% to 36.2%) ($p =$

0.006 versus placebo); and esomeprazole 40 mg, 26.1% (19.4% to 32.9%) ($p = 0.001$ versus placebo). Patients on either non-selective NSAIDs or selective COX-2 inhibitors appeared to benefit. The frequency of adverse events was similar in the three groups. Esomeprazole maintains relief of NSAID-associated upper GI symptoms in patients taking continuous NSAIDs, including selective COX-2 inhibitors.

Fall risk in an active elderly population – can it be assessed?

Uffe Laessoe, Hans C Hoeck, Ole Simonsen, Thomas Sinkjaer and Michael Voigt

Journal of Negative Results in BioMedicine 2007

Abstract

Background: Falls amongst elderly people are often associated with fractures. Training of balance and physical performance can reduce fall risk; however, it remains a challenge to identify individuals at increased risk of falling to whom this training should be offered. It is believed that fall risk can be assessed by testing balance performance. In this study a test battery of physiological parameters related to balance and falls was designed to address fall risk in a community dwelling elderly population.

Results: Ninety-four elderly males and females between 70 and 80 years of age were included in a one year follow-up study. A fall incidence of 15% was reported. The test battery scores were not different between the fallers and non-fallers. Test scores were, however, related to self-reported health. In spite of inclusion of dynamic tests, the test battery had low fall prediction rates, with a sensitivity and specificity of 50% and 43% respectively.

Conclusion: Individuals with poor balance were identified but falls were not predicted by this test battery. Physiological balance characteristics can apparently not be used in isolation as adequate indicators of fall risk in this population of community dwelling elderly. Falling is a complex phenomenon of multifactorial origin. The crucial factor in relation to fall risk is the redundancy of balance capacity against the balance demands of the individuals levels of fall-risky lifestyle and behavior. This calls for an approach to fall risk assessment in which the physiological performance is evaluated in relation to the activity profile of the individual.

Do supervised weekly exercise programs maintain functional exercise capacity and quality of life, twelve months after pulmonary rehabilitation in COPD?

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BMC Pulmonary Medicine 2007

Abstract

Background: Pulmonary rehabilitation programs have been shown to increase functional exercise capacity and quality of life in COPD patients. However, following the completion of pulmonary rehabilitation the benefits begin to decline unless the program is of longer duration or ongoing maintenance exercise is followed. Therefore, the aim of this study is to determine if supervised, weekly, hospital-based exercise compared to home exercise will maintain the benefits gained from an eight-week pulmonary rehabilitation program in COPD subjects to twelve months.

Methods: Following completion of an eight-week pulmonary rehabilitation program, COPD subjects will be recruited and randomised (using concealed allocation in numbered envelopes) into either the maintenance exercise group (supervised, weekly, hospital-based exercise) or the control group (unsupervised home exercise) and followed for twelve months. Measurements will be taken at baseline (post an eight-week pulmonary rehabilitation program), three, six and twelve months. The exercise measurements will include two six-minute walk tests, two incremental shuttle walk tests, and two endurance shuttle walk tests. Oxygen saturation, heart rate and dyspnoea will be monitored during all these tests. Quality of life will be measured using the St George's Respiratory Questionnaire and the Hospital Anxiety and Depression Scale. Participants will be excluded if they require supplemental oxygen or have neurological or musculoskeletal co-morbidities that will prevent them from exercising independently.

Discussion: Pulmonary rehabilitation plays an important part in the management of COPD and the results from this study will help determine if supervised, weekly, hospital-based exercise can successfully maintain functional exercise capacity and quality of life following an eight-week pulmonary rehabilitation program in COPD subjects in Australia.

Cardiac asthma in elderly patients: incidence, clinical presentation and outcome

Stéphane Jorge, Marie-Hélène Becquemin, Samuel Delerme, Mohamed Bennaceur, Richard Isnard, Rony Achkar, Bruno Riou, Jacques Boddart, Patrick Ray

BMC Cardiovascular Disorders 2007

Abstract

Background: Cardiac asthma is common, but has been poorly investigated. The objective was to compare the characteristics and outcome of cardiac asthma with that of classical congestive heart failure (CHF) in elderly patients.

Methods: Prospective study in an 1,800-bed teaching hospital.

Results: Two hundred and twelve consecutive patients aged ≥ 65 years presenting with dyspnea due to CHF (mean age of 82 ± 8 years) were included. Findings of cardiac echocardiography and natriuretic peptides levels were used to confirm CHF. Cardiac asthma patients were defined as a patient with CHF and wheezing reported by attending physician upon admission to the emergency department. The CHF group ($n = 137$) and the cardiac asthma group ($n = 75$), differed for tobacco use (34% vs. 59%, $p < 0.05$), history of chronic obstructive pulmonary disease (16% vs. 47%, $p < 0.05$), peripheral arterial disease (10% vs. 24%, $p < 0.05$). Patients with cardiac asthma had a significantly lower pH (7.38 ± 0.08 vs. 7.43 ± 0.06 , $p < 0.05$), and a higher PaCO₂ (47 ± 15 vs. 41 ± 11 mmHg, $p < 0.05$) at admission.²In the cardiac asthma group, patients had greater distal airway obstruction: forced expiratory volume in 1 second of 1.09 vs. 1.33 Liter ($p < 0.05$), and a forced expiratory flow at 25% to 75% of vital capacity of 0.76 vs. 0.99 Liter ($p < 0.05$). The in-hospital (23% vs. 19%) and one year mortality (48% vs. 43%) rates were similar.

Conclusion: Patients with cardiac asthma represented one third of CHF in elderly patients. They were more hypercapnic and experienced more distal airway obstruction. However, outcomes were similar.

Effect of multivitamin and multiminerall supplementation on cognitive function in men and women aged 65 years and over: a randomised controlled trial

Geraldine McNeill, Alison Avenell, Marion K Campbell, Jonathan A Cook, Philip C Hannaford, Mary M Kilonzo, Anne C Milne, Craig R Ramsay, D Gwyn Seymour, Audrey I Stephen, Luke D Vale

Nutrition Journal 2007,

Abstract

Background: Observational studies have frequently reported an association between cognitive function and nutrition in later life but randomised trials of B vitamins and antioxidant supplements have mostly found no beneficial effect. We examined the effect of daily supplementation with 11 vitamins and 5 minerals on cognitive function in older adults to assess the possibility that this could help to prevent cognitive decline.

Methods: The study was carried out as part of a randomised double blind placebo controlled trial of micronutrient supplementation based in six primary care health centres in North East Scotland. 910 men and women aged 65 years and over living in the community were recruited and randomised: 456 to active treatment and 454 to placebo. The active treatment consisted of a single tablet containing eleven vitamins and five minerals in amounts ranging from 50–210 % of the UK Reference Nutrient Intake or matching placebo tablet taken daily for 12 months. Digit span forward and verbal fluency tests, which assess immediate memory and executive functioning respectively, were conducted at the start and end of the intervention period. Risk of micronutrient deficiency at baseline was assessed by a simple risk questionnaire.

Results: For digit span forward there was no evidence of an effect of supplements in all participants or in sub-groups defined by age or risk of deficiency. For verbal fluency there was no evidence of a beneficial effect in the whole study population but there was weak evidence for a beneficial effect of supplementation in the two pre-specified subgroups: in those aged 75 years and over ($n = 290$; mean difference between supplemented and placebo groups 2.8 (95% CI -0.6, 6.2) units) and in those at increased risk of micronutrient deficiency assessed by the risk questionnaire ($n = 260$; mean difference between supplemented and placebo groups 2.5 (95% CI -1.0, 6.1) units).

Conclusion: The results provide no evidence for a beneficial effect of daily multivitamin and multiminerall supplements on these domains of cognitive function in community-living people over 65 years. However, the possibility of beneficial effects in older people and those at greater risk of nutritional deficiency deserves further attention.

Effects of risk-based multifactorial fall prevention on health-related quality of life among the community-dwelling aged: a randomized controlled trial

Sari Vaapio, Marika Salminen, Tero Vahlberg,

Noora Sjösten, Raimo Isoaho, Pertti Aarnio, Sirkka-Liisa Kivelä

Health and Quality of Life Outcomes 2007

Abstract

Background: This study aimed to assess the effects of a risk-based, multifactorial fall prevention programme on health-related quality of life among the community-dwelling aged who had fallen at least once during the previous 12 months.

Methods: The study is a part of a single-centre, risk-based, multifactorial randomised controlled trial. The intervention lasted for 12 months and consisted of a geriatric assessment, guidance and treatment, individual instruction in fall prevention, group exercise, lectures on themes related to falling, psychosocial group activities and home exercise. Of the total study population ($n = 591$, 97% of eligible subjects), 513(251 in the intervention group and 262 in the control group) participated in this study. The effect of the intervention on quality of life was measured using the 15D health-related quality of life instrument consisting of 15 dimensions. The data were analysed using the chi-square test or Fisher's exact test, the Mann-Whitney U-test and logistic regression.

Results: In men, the results showed significant differences in the changes between the intervention and control groups in depression ($p = 0.017$) and distress ($p = 0.029$) and marginally significant differences in usual activities ($p = 0.058$) and sexual activity ($p = 0.051$). In women, significant differences in the changes between the groups were found in usual activities ($p = 0.005$) and discomfort/symptoms ($p = 0.047$). For the subjects aged 65 to 74 years, significant differences in the changes between the groups were seen in distress ($p = 0.037$) among men and in usual activities ($p = 0.011$) among women. All improvements were in favour of the intervention group.

Conclusion: Fall prevention produced positive effects on some dimensions of health-related quality of life in the community-dwelling aged. Men benefited more than women.

Ethical challenges related to elder care. High level decision-makers' experiences

Anna-Greta Mamhidir, Mona Kihlgren, Venke Sorlie

BMC Medical Ethics 2007

Abstract

Background: Few empirical studies have been found that explore ethical challenges among persons in high public positions that are responsible for elder care. The aim of this paper was to illuminate the meaning

of being in ethically difficult situations related to elder care as experienced by high level decision-makers.

Methods: A phenomenological-hermeneutic method was used to analyse the eighteen interviews conducted with political and civil servant high level decision-makers at the municipality and county council level from two counties in Sweden. The participants worked at a planning and control as well as executive level and had both budget and quality of elder care responsibilities.

Results: Both ethical dilemmas and the meaning of being in ethically difficult situations related to elder care were revealed. No differences were seen between the politicians and the civil servants. The ethical dilemmas mostly concerned dealings with extensive care needs and working with a limited budget. The dilemmas were associated with a lack of good care and a lack of agreement concerning care such as vulnerable patients in inappropriate care settings, weaknesses in medical support, dissimilar focuses between the caring systems, justness in the distribution of care and deficient information. Being in ethically difficult situations was challenging. Associated with them were experiences of being exposed, having to be strategic and living with feelings such as aloneness and loneliness, uncertainty, lack of confirmation, the risk of being threatened or becoming a scapegoat and difficult decision avoidance.

Conclusion: Our paper provides further insight into the ethical dilemmas and ethical challenges met by high level decision-makers', which is important since the overall responsibility for elder care that is also ethically defensible rests with them. They have power and their decisions affect many stakeholders in elder care. Our results can be used to stimulate discussions between high level decision-makers and health care professionals concerning ways of dealing with ethical issues and the necessity of structures that facilitate dealing with them. Even if the high level decision-makers have learned to live with the ethical challenges that confronted them, it was obvious that they were not free from feelings of uncertainty, frustration and loneliness. Vulnerability was revealed regarding themselves and others. Their feelings of failure indicated that they felt something was at stake for the older adults in elder care and for themselves as well, in that there was the risk that important needs would go unmet.

Instructions for Authors

Journal of the Indian Academy of Geriatrics is an official publication of the Indian Academy of Geriatrics. This peer-reviewed Journal would be published quarterly (March, June, September and December). It publishes regular articles-original clinical studies and experimental investigations, review of basic and clinical topics, brief communications, case reports concerning all aspects of Geriatrics.

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Regular Articles are full length papers that address research questions with exhaustive study design and methodology. The entire manuscript including abstract and references should not exceed 15 typed pages in double space and should not contain more than 30 references.

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The title should be brief and comprehensive, preferably less than fifteen words with the first letter of each word typed in capitals. The name of the authors (initials followed by surnames) should be written in continuation followed by the name of the department and the Institution where the study was carried out. A footnote may be added to indicate address for correspondence and e-mail address. All authorship must fulfill Vancouver agreement (BMJ 1991; 302)

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State the problem considered, methods, results and conclusions in less than 250 words, and key words. The abstract should consist of four paragraphs, labeled Background, Methods, Result and Conclusions.

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Journal article

Luke RG, Jones P and Diethelm AG. Hypertension in elderly. Am J Med 1982; 75; 88-95

Abstract

Yoo KH, Norwood VF, Chevalier RL. Regulation of Aging (Abstract). Nature 1995; 65:82-91

Chapters in Book

John T Potts: Disorders of the parathyroid gland; Harrison's Principles of Internal Medicine, 15 edn., Braunwald, Fauci, Kasper, Hauser, et al (eds), McGraw Hill, 2001, p2224-6

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