

Health Science

- **Pattern of post discharge antimicrobial usage in elderly diabetic patients with skin and soft tissue infections**

Alex Baby Paul, Priya Vijayakumar

Department of Geriatric Medicine, Amrita Institute of Medical Sciences, Kochi, Kerala

Introduction: Patients with Diabetes are susceptible for developing skin and soft tissue infections and this risk is more in elderly. Early switch (ES) programmes promote switching patients from i.v. to oral antibiotic therapies and early discharge (ED) programmes enable patients to finish treatment after hospital discharge. Since the discharge antimicrobial usage pattern varies from clinicians and patients, knowledge about it will help in formulating better antimicrobial usage policies in the setting of widespread antimicrobial resistance.

Materials and Methods: This is a retrospective descriptive hospital based study. Prescription and patient records of patients aged 60 and above diagnosed to have SSTI with Diabetes admitted in Amrita Institute of Medical Sciences from January 2016 to September 2016 were reviewed and analysed. Pattern of discharge antimicrobial usage, average duration of therapy was calculated based on culture sensitivity reports.

Results: Seventy two patients above 60 years were included in the study. The mean age was 68.33 years and 69.44% were males. The average duration of hospital stay was 12 days. Most common clinical diagnosis was Gangrene (45.8%) followed by Cellulitis (18.05%). Culture sensitivity was done in 75% patients and 68% of post discharge prescriptions were based on culture sensitivity reports. Number of antimicrobial per patient was 1. 43.59% patients received only 1 post discharge antibiotic and 37.5% received 2 antibiotics per prescription. From total of 103 antimicrobials used in 72 patients. The class of antimicrobials used were Fluroquinolones (40.7%), Beta-lactams (27.1%), Oxazolidinones (14.56%), Lincosamides (6.56%) Antifungals (3.88%), Nitroimidazoles (1.9%), Sulphonamides (1.9%). Macrolides, Tetracyclines and sulphonamides constituted less than 1%.

The most commonly prescribed antibiotics were Ciprofloxacin (16.5%), Linezolid (14.56%), Amoxicillin-Clavulinic Acid (12.6%).

Conclusion: Knowledge of pattern and judgmental use of antibiotics will reduce the burden of multi-drug resistance, thereby enabling better patient management and limiting the morbidity and mortality in elderly patients.

- **A study of anemia in elderly**

A Rizwan, R Bage, P Paljor, V Kumar,

Department of Medicine, St. Stephens Hospital, Delhi

Introduction: Anemia is common in elderly and their clinical and etiological profile is different from young

Material and methods: 150 elderly indoor patients (age ≥ 60 years, mean age 67.6 ± 7.9 ; 73M, 77F) of various disorders having hemoglobin < 11.5 gm/dl were studied for clinical and etiological profile.

Results: General symptoms of anemia were present in 94%, while geriatric symptoms (angina, syncope, tingling, falls and impaired cognition) in $< 5\%$ of patients. Falls and cognitive impairment were more frequent in patients aged ≥ 90 years. 38%, 43.3% and 18.6% of patients had mild, moderate and severe anemia respectively with mean hemoglobin of 9.12 ± 1.8 gm/dl in 150 patients. A relation was observed between increasing age of patient and severity of anemia. No relationship was observed between severity of anemia and BMI or socioeconomic status. Morphologically 41.3%, 27.3%, 17.3% and 14% of patients had normocytic normochromic, microcytic hypochromic, macrocytic normochromic and normocytic hypochromic anemia.

45.3%, 44.6% and 19.3% of cases had nutritional, chronic disease and idiopathic etiology. Nutritional anemia comprised of iron deficiency (26%), megaloblastic (13.3%) and dimorphic anemia (6%). Few had ≥ 1 cause. Significantly lower serum iron in iron deficiency and lower serum B12 and folate in megaloblastic anemia were found while

dimorphic anemia had deficiency of all the 3 nutrients.

Conclusions:-Ageing was observed to have increasing severity of anemia often of normocytic normochromic type. Iron deficiency, megaloblastic, chronic disease and idiopathic were the common causes.

- **Easy-Care Standard Instrument to Screen for Geriatric Syndromes Among the Very Old**

Ayantika Haldar, Vakil Ahmed,
A Chakravarty, P Chatterjee, A.B. Dey

Department: Geriatric Medicine, All India Institute of Medical Sciences, New Delhi

Introduction: Chronic disease, functional impairment, cognitive decline etc. render the “older” segment of the population extremely vulnerable. With very little orientation in old age care, health professionals do not have capacity to resolve complex geriatric syndromes in busy outpatient clinics. Here we assessed the ability of EASY-Care to screen for geriatric syndromes in vulnerable older clients attending outpatient department vis-à-vis comprehensive geriatric assessment.

Materials and Methods: In this cross sectional study, persons aged 65 years or more seeking care from Outpatient Department(OPD) of Geriatric Medicine service of All India Institute of Medical Sciences Hospital in India, were included. 600 consenting participants were assessed with the EASY-Care Standard 2010 instrument, which was self-administered with the help of a trained Medical Social Worker. This was followed by independent comprehensive assessment by a geriatrician which specifically included of Hindi Mental State Examination (HMSE), Geriatric Depression Scale (GDS), International Consultation on Incontinence Questionnaire (ICIQ), and fall questionnaire. Four geriatric syndromes, namely, cognitive impairment, depression, falls and urinary incontinence were used as index syndromes for this study.

Results: The mean age of the participants was 71 years with a significant male predominance (70%). One or more geriatric syndromes were present in 77% of the individuals with 2% having all four geriatric syndromes and 42% having two or more geriatric syndromes. Based on EASY-Care assessment, cognitive impairment was the most common geriatric syndrome (62%), followed by depression (36%), falls (24%), and urinary incont-

inence (14%). The prevalence of incontinence and cognitive impairment showed significant association with increasing age $\{(p<0.05), (p=0.01)\}$. EASY-Care assessment data showed a concordance of 98%, 70%, and 40% with CGA assessment for incontinence, depression, cognitive impairment respectively.

Conclusion: EASYCare is the only tool for elderly that qualifies as a validated questionnaire which can be used by paramedical workers or by the patient himself/herself in a time and cost efficient manner, for assessment and detection of geriatric syndromes without compromising the standard of assessment.

- **A study to assess the quality of life among senior citizens in selected Urban area of Thane District of Maharashtra**

Bhadrapriya Sanjay Parab, Gajanan D. Velhal

Department of Community Medicine, Seth. G.S Medical college & K.E.M Hospital, Mumbai

Many factors influence health-related quality of life of elderly people such as disability, chronic pain, social isolation, functional status, increased dependency ratio, weak family/community support, multiple health complaints etc. Important is to add life to the extended years and it is joint responsibility of the individual, family, community and public sector. This study assessed perceived quality of life among senior citizen in selected urban area of Thane District. Majority of senior citizen are having various medical illnesses like hypertension, diabetes, arthritis, heart problem, cataract etc. Analysis of quality of life domain shows that quality of life among all the domain is less than 50% hence to improve the quality of life among senior citizens requires some sort of comprehensive intervention.

- **Effectiveness of structured teaching programme for primary care givers on the home care management of elderly with dementia**

Dhawal Dwivedi, Raman Deep Pattanayak, Deepika Khakha, A B Dey

All India Institute of Medical Sciences, New Delhi

Introduction: Ageing leads to several physical and mental changes resulting in progressive loss of functional capacity such as dementia, which require constant attention. There are deficits in the knowledge regarding the care

giving aspects of dementia patients in the caregivers. The study aimed to assess the effect of structured teaching programme (STP) on the knowledge among caregivers of elderly with dementia.

Material & Methods: In this pre experimental one group pre-test post-test design study, 35 primary caregivers of dementia patients were enrolled conveniently from Geriatric medicine OPD AIIMS, New Delhi. The STP was conducted for the primary caregivers, on one to one basis. The STP consists various aspects of home care management. The knowledge scores of primary caregivers was assessed with self-prepared 25 dichotomous questions.

Results: About 77.1% of the caregivers did not hear about dementia previously. The mean pre-test knowledge score was 10.71 ± 3.26 . The mean post-intervention score on day 1 was 18.23 ± 2.75 and on day 15 it was 17.37 ± 3.25 . There was significant improvement in knowledge scores at a p value <0.001 . None of the demographic and select variables of the primary caregivers were found to be associated with knowledge scores. About 74% of the primary caregivers showed very good acceptance of the STP.

Conclusion: The STP was effective in improving the knowledge of the primary care givers. This highlights the need of educating primary caregivers regarding home care management of elderly dementia patients.

- **Mobile Health Initiatives in Old Age Care: Needs, Attitudes and Expectations of Older Indians.**

**Gaurav Desai, Manish Pathak,
Supriya Singh, A.B. Dey**

Department of Geriatric Medicine, All India Institute of Medical Sciences, New Delhi, Department of Social Sciences, JNU

Introduction: mHealth is a novel and promising tool to improve and support effective care for the elderly. However significant challenges remain, primary of which are the older individuals resistance to and suspicion of technology. It is therefore imperative to modify and adopt mHealth technology after understanding the needs and attitudes at a local level.

Material & Methods: We carried out a study based on a specially designed questionnaire to assess the needs among 260 elderly individuals from both the outpatient department at AIIMS and the community settings in Delhi. The study is

ongoing and preliminary analysis of 75 elderly individuals revealed certain trends. Around 90% of the individuals either owned a mobile phone or had accessibility to one.

Results: Nearly 70% of the individuals had a favorable attitude towards mHealth services. The mHealth services preferred were Health services (appointments etc.), educational content and social isolation and security (in that order). Amongst the medical issues; Dementia, Cancer and visual loss were their greatest fears. The most preferred medium for service delivery were telephone calls followed by SMS and social media. Among the more important factors associated with support of mHealth services were lower education status, lower middle class, ownership of a mobile phone and regular users of mobile internet.

Conclusions: To conclude, preliminary analysis has revealed a favorable trend in terms of both mobile phone usage and attitudes towards their use in healthcare and further analysis will shed more light.

- **Geriatric Syndromes with Heart Failure: Implication in Clinical Practice**

**Harjit Singh, P Chatterjee, A
Chakrawarty, Rajiv Narang, AB Dey**

Department of Geriatric Medicine, Cardiology, All India Institute of Medical Sciences, New Delhi.

Introduction: Heart failure (HF) is a common health problem and its prevalence follows an exponential pattern, rising with age, and may affect up to 10% of population over the age of 65, worldwide. Geriatric syndromes (GS) like polypharmacy, frailty, cognitive impairment, depression are very loosely defined and in India data about its association and co-occurrence with HF is extremely sparse. The purpose of this study is to assess the co-occurrence and association of major geriatric syndromes with heart failure in older patients of a tertiary care hospital in India

Materials and method: In this cross sectional case-control study, conducted in the Department of Geriatric Medicine, 220 patients with clinical and radiological features of HF (Boston criteria) and equal number of age and sex matched controls (patients without HF) were evaluated. They were subjected to detailed clinical examination, chest X-Ray, echocardiography along with comprehensive geriatric assessment. For cognitive impairment Hindi MMSE, GDS for depression was used. patient evaluated based on Fried's criteria for frailty and self-report information respectively.

Patients were managed as per standard treatment protocol for HF

Results: Out of the 220 case and 220 controls, 94% of patients with HF were below 80 years of age. Polypharmacy (58.20%) was the most common GS, present in patients of HF followed by frailty (38.18%). Compared to controls, frailty ($p=0.05$), depression ($p<0.01$), cognitive impairment ($p<0.01$) showed significant association with heart failure

Conclusion: HF has significant association with major GS because of shared risk factors. Coordinated management of both heart failure and geriatric syndromes is important.

- **Orthostatic Hypotension among Indian elderly**

Hrishikesh Indani, A B Dey

Department of Geriatric Medicine, All India Institute of Medical Sciences, New Delhi

Introduction: Orthostatic Hypotension is a common medical condition in elderly, associated with age related physiological impairments in combination with higher prevalence of co-morbid and age-related disorders and concomitant medications. Clinical and epidemiological studies show that OH is associated with falls, syncope and hospitalization; they also demonstrate that OH is an independent risk factor for cardiovascular disease, kidney disease and death.

Material and Methods: In this prospective cross-sectional observational study carried out at All India Institute of Medical Sciences, New Delhi, we recruited a total of 150 subjects from three different settings (50 each): outpatient services; inpatient services and apparently healthy subjects. OH was defined as a reduction in BP from baseline of 20 mmHg systolic or 10 mmHg diastolic within 3 min of tilting/standing. All subjects then underwent a detailed clinical review and a comprehensive geriatric assessment.

Results: The frequency of OH in the three different settings and the correlates of OH were identified and the association with different clinical consequences described.

Conclusions: OH is a prevalent condition in the Indian elderly with significant consequences.

- **Evaluation of syncope for cardiovascular causes and its impact on cognitive status**

Kamal Bandhu Kalanidhi, Rakesh Yadav, Ashima Nehra, A B Dey

Departments of Geriatric Medicine, Cardiology and Neuropsychiatry, All India Institute of Medical Sciences, New Delhi

Introduction- Syncope is a transient loss of consciousness due to transient global cerebral hypoperfusion characterized by rapid onset, short duration, and spontaneous complete recovery. Sudden temporary reduction in cerebral blood flow to the parts of brain that control the level of consciousness. (reticular activating system). To evaluate the cause of syncope in old patients age 75 and more with a special emphasis on cardiovascular causes. To assess the impact of recurrent syncope on cognitive status.

Methodology- In a case control study patients from outpatient and in-patient services of the department of Geriatric Medicine, were included after satisfying the pre-defined inclusion and exclusion criteria. They were assessed for cardiovascular syncope and cognitive impairment and were compared with age and sex matched controls.

Results- 40 cases and 40 controls were taken and it has been found that patient having syncope are found to be cognitively impaired as compared to control.

Discussion- Due to inadequate blood flow to the reticular activating system, which controls the cognitive function. Patient having recurrent syncope is found to be cognitively impaired as compared to normal patient who does not have syncope.

Conclusion- Most of the cardiovascular syncope are due to treatable cause so if we intervene earlier we can prevent the patient from decline in cognitive status.

- **Gait profile of health seeking elderly in a tertiary care hospital**

Manicka Saravanan, P Chatterjee, A Chakrawarty, A.B.Dey

Department of Geriatric Medicine, All India Institute of Medical Sciences, New Delhi.

Introduction: Gait and balance changes are common in ageing. In this ongoing cross sectional observational study we are looking at the Gait profile of the health seeking elderly.

Materials and Methods: Ambulatory health seeking elders (> 65 years) attended the Geriatric Medicine OPD were randomly included. Gait parameters were assessed by patients walking at their own pace. Cognition was assessed by Montreal

cognitive assessment. Frailty index was calculated by Rockwood's deficit accumulation model.

Results: 28 Subjects (22 males and 6 females) were included in this preliminary analysis. Mean age was 74.53(+10.05) years. Mean (+SD) values of gait speed was 0.48 metre/second (+0.17), Step Cycle time 0.83 cycle/second, (+0.16), Stride Length (Right) 64.64 centimeter (+29.20), Stride Length (Left) 59.85 centimeter (+29.57). 42.86% had polypharmacy. Mean TUG score was 15.63 seconds (+ 5.08). 71.43% were frail. 40% patients had mild cognitive impairment and 15% had major neurocognitive disorder. Around two third of patients (64.29%) were at risk of malnutrition.

Conclusion: Mean gait score of this study group is lesser than that of western population. There were multiple factors influencing gait in this population which include malnutrition, cognitive status and poly pharmacy.

- **Effect of nutrition on aging profile with special reference to eastern Rajasthan**

Manju Lata, P Srivastav, P Sharma

M. S. J. College Bharatpur

Introduction: Aging is inevitable. The world over, populations have been aging and India is not an exception. People at or over the age of 60, constitute above 7.7% of total population. Aging is a natural process that begins at conception, progresses through one's life and ends with death but vary with the food taken in this course. This study is conducted for the nutrition health of aged person in eastern Rajasthan.

Method: 145 aged people vary from age 60 to 91 years with average age of 71.4 years were chosen from district of Bharatpur and Alwar. A questionnaire having question on food habit, daily routine, health problem as well as on heredity is used for survey.

Result: Male had good food than female due to traditional belief. Females micronutrient were very less. Protein and vitamin intake is very less in female and 12% were suffering from anemia. 32% more females were suffering from health problem than male. 28% male were suffering from BP whereas heart problem in female is 31% more than male counterpart.

Conclusion: Male nutritive status is better than female and females are suffering from many health problems in eastern Rajasthan.

- **Healthy aging -with the shore up of Ayurveda**

P Jyolsna, M.C Shobhana

Swasthavritta department V.P.S.V Ayurveda College, Kottakkal

Introduction-Over the past century, life expectancy has increased dramatically and the world will soon have more old people than children. By the year 2050 more than 1 in every 5 persons throughout the world will be above 60. The traditional Indian society and the age-old joint family system have been instrumental in safeguarding the social and economic security of the elderly. With rapid changes in society and the emergence of nuclear families, aged are likely to be exposed to emotional, physical and financial insecurity. Elderly population has longevity on one hand and compromised quality-of-life on the other.

Materials & Method-To have a clear cut idea about the problems of aged, A survey has been conducted on 60 persons of the age group 60 to 80 in Charitable OP unit of Arya Vaidyasala Kottakkal, Kerala

Results-The results are statistically analyzed and data is presented. Preventive methods for a healthy ageing is suggested as per the data.

Conclusion The core aim of Ayurveda is to promote longevity and retard ageing process. Propagating healthy lifestyle through Dinacharya, Ritucharya, Sadvritta are a well-planned protocol which can be implemented as population strategy for preventing premature ageing and promoting healthy life span. This presentation is a humble effort to elicit the problems of the aged, and to develop a practical Ayurvedic protocol for geriatric health care.

- **Association of diabetes and its complications with the quality of life in older people of India**

Pramod Kumar, Rishav Bansal, S N Dwivedi, A B Dey

Departments of Geriatric Medicine, Biostatistics, All India Institute of Medical Sciences, New Delhi

Introduction – Most previous studies on diabetes and quality of life report worse quality of life for people with diabetes compared to the general population, especially regarding physical functioning and well-being. However, many of the studies on impact of diabetes on mental health have been done in western countries. Also studies of

impact of diabetes on mental health and quality of life in Indian settings are lacking with almost none dedicated for older Indian diabetic patients.

Materials and methods –A cross sectional comparative study (180 diabetic cases, 180 age-sex matched non-diabetic controls; aged ≥ 60 years) was conducted in Geriatric Medicine OPD between November, 2014 to June, 2016. Quality of life was assessed using World Health Organisation Quality of Life-BREF (WHOQOL-BREF).

Results –There was significantly lower mean scores of WHOQOL-BREF (physical, psychological, social and environmental domains) in diabetics as compared to the non-diabetics [59.04 v/s 74.61 (p value 0.000), 65.96 v/s 77.71 (p value 0.000), 74.11 v/s 78.68 (p value 0.013) and 71.08 v/s 78.50 respectively].

Conclusions –Older people with diabetes have a worse quality of life as compared to non-diabetics. It may be reasonable to assess diabetic patients for quality of life on health care visits.

- **Determination of cut off level of Brain Natriuretic Peptide to differentiate between cardiogenic and non-cardiogenic acute dyspnea in elderly**

Priyanka Singh, Shubham Prasad, Shivam Verma, Madhukar Rai, I.S. Gambhir

Institute of Medical Sciences, Banaras Hindu University

Introduction–About 60% of those presenting with dyspnoea are aged ≥ 65 years. Aim of this study was to determine cut off level of BNP to differentiate between cardiogenic and non cardiogenic causes of dyspnea in older age.

Material and Methods–This was an in hospital cross - sectional study conducted on patients >50 years of age presenting with acute dyspnea to Department of General Medicine, S.S. Hospital, IMS, Banaras Hindu University, Varanasi between July 2015 to June 2016. Point of care BNP level was measured on Alera Triage - Cardio product insert. All patients underwent 2D Echocardiography [ECHO] with colour Doppler as gold standard and ejection fraction of $<45\%$ was considered left ventricular dysfunction.

Results–Total 105 patients presenting with acute dyspnea were evaluated with mean age of 60 years. No. of males and females was almost equal. Median BNP level in patients with cardiogenic dyspnea was 875 pg/ml and among those with non

cardiogenic dyspnea was 101pg/ml. ROC at BNP level of 433 pg/ml was generated. At confidence interval of 95% and p value of 0.001, area under curve was 1.00. Optimum cut off point for detection of cardiogenic dyspnea was 433 pg/ml with sensitivity and specificity of 98% and 100% respectively.

Conclusion–Although Brain Natriuretic Peptide is very sensitive marker for diagnosing cardiac dyspnea, its application in clinical setting especially in ageing population is often limited by the absence of universally accepted cut off level. This study gives us a reliable cut off point of 433 pg/ml of BNP to distinguish between cardiogenic vs non cardiogenic dyspnea in ageing population.

- **Safety and Efficacy of Ketamine for Short procedural anesthesia in elderly**

Rakesh Mishra, Prasad Mathews., K.G. Gopinath, Pranita Roy

Department of Geriatrics, CMC, Vellore

Introduction: The objective of this study was to study safety and efficacy of Ketamine, a dissociative anesthetic agent in elderly inpatients for short procedural anesthesia, with a focus on cognitively impaired patients

Materials and Methods: A retrospective analysis of data from inpatient records of the patients admitted over 1 year from April 2014 to April 2016 under the Department of Geriatrics, in a tertiary care hospital in South India was done. The starting dose used was 0.3 mg/kg and the maximum dose used was 1 mg/kg. The blood pressures, pulse and oxygen saturation were monitored during and after the procedure and the patients were monitored for the side effects of vomiting and worsening of delirium.

Results: Twenty-five patients were found to have received Ketamine for short procedures like MRI brain, MRI spine, colonoscopy, bone marrow and lumbar puncture. Thirteen of the twenty five patients had dementia, ten had delirium and two chose to have ketamine for procedures of lumbar puncture and bone marrow. All these procedures were safely and successfully completed in all these age groups and there was no mortality or significant morbidity during the procedures. There were two deaths many days after administering ketamine opined to be due to the underlying disease. All the procedures were effectively completed without requiring any cardiopulmonary support and there were no adverse outcomes.

Conclusion: Ketamine was found to be effective and safe for short procedural anesthesia in the geriatric population.

- **Study of rheumatoid arthritis in older patients**

Ramesh Sah, SN Dwivedi, Uma Kumar, C J Das, AB Dey

Departments of Geriatric medicine, Biostatistics, Rheumatology, Radiology All India Institute of Medical Sciences, New Delhi

Introduction-The Rheumatoid arthritis (RA) is a most common chronic destructive systemic inflammatory disease of synovial joints of the body leading to joint deformity over time with reduced physical functions, impaired quality of life and severe disability. To study the spectrum of RA in older patients with special emphasis on clinical, radiological, immunological profile, disease severity and disability. To study the diagnostic utility of a new serum 14-3-3 η marker in RA compared to standard clinical and serological measures.

Methodology-All patient with Polyarthritits of both gender and age above 60 years were evaluated for screening of RA in OPD of the Geriatric medicine Department. Included patients were reviewed in clinical, radiological and immunological assessments. A new serum marker 14-3-3 η assessed. Cross sectional study with convenient sample of 200 polyarthritits patients.

Results-Based on disease duration, activity, severity and disability parameters. Tender joint count (TJC), swollen joint count (SJC), and disease activity score (DAS 28) measured. Disability assessed using the Indian version Health Assessment Questionnaire disability index (HAQ DI). Demographic characteristics, baseline co-morbidity and extra-articular manifestations were identified by case records and documented nature of the medications being prescribed for that co-morbidity.

Conclusion –The clinical, radiological, immunological profile, disease severity and disability of RA in elderly varies.

- **Association of diabetes and its complications with cognitive dysfunction in older people of India**

Rishav Bansal, S. N. Dwivedi, A. B. Dey

Departments of Geriatric Medicine, Biostatitics, All India Institute of Medical Sciences, New Delhi

Introduction - Diabetes is a known risk factor for mental health disorders but studies on elderly diabetic in developing countries are limited. Each country should assess its own burden on mental health due to chronic diseases like diabetes.

Materials and methods – A cross sectional comparative study (180 diabetic cases, 180 age-sex matched nondiabetic controls; aged \geq 60 years) was conducted in Geriatric Medicine OPD between November, 2014 to June, 2016. Cognitive dysfunction was assessed using Montreal Cognitive Assessment (MoCA) Scale.

Results - There was significantly higher prevalence of cognitive dysfunction in diabetic (53.9%) as compared to non-diabetic (27.2%) (p-value <0.01). On subgroup analysis, cerebrovascular disease was more associated with cognitive dysfunction (82.4%) than those without cerebrovascular disease (50.9%) (p-value 0.013) among diabetic group.

Conclusions - Diabetes is associated with increased risk of cognitive dysfunction, while cerebrovascular disease (CVD) is associated with even more risk of cognitive dysfunction. So, all diabetic patient (especially those with CVD) should be assessed for cognitive dysfunction at each health care visit.

- **Correlation between depressive symptoms and functional disability among selected older population of Delhi.**

Sandhya Gupta, Laxmikumari

College of Nursing, All India Institute of Medical Sciences, New Delhi

Introduction: In spite of a large share of older persons' population the health status of this group is not satisfactory. At a large they are affected by disabilities and impairments. Most of the time depression went undiagnosed in this group and hence untreated.

Materials and Method: A quantitative cross-sectional approach was used. 100 elderly enrolled, by convenience sampling. Tools: Geriatric Depression Scale (r=0.964), The SF-12 health survey (r= 0.89-0.90), WHODAS 2.0(r= \geq 0.90) and subject data sheet.

Results: In 100 subjects the mean age was 65.5 years, with equal male and female ratio, belonging to Hindu religion. Forty nine percent of subjects were illiterate, most of them retired and housewives, with an income of $<$ Rs.5000 per month. 51% found difficulty in concentration. 32% elderly reported severe inability in standing, 42% of them

reported moderate to extreme difficulty in staying alone, 50% of older persons reported mild to extreme difficulty in ADL's, 29% of them reported difficulty in participating in community activities, 50% of older persons reported they were emotionally affected by their health condition, 34% of them reported their physical health as poor, 55% of them reported pain. The median depression score was 6 (ranged from 4-8), and correlated with disability scores ($r=0.5753$, $p=0.0001$).

Conclusion: The General health scores are low in the study. Functional disability was higher in older persons with higher depressive symptoms scores. There is need to assess general health and depressive symptoms and accordingly refer them for appropriate treatment so that their functional ability can also be enhanced.

- **A correlational survey of instrumental activities of daily living of older persons with their status of depressive symptoms**

Sandhya Gupta, Manphool Singh

College of Nursing, All India Institute of Medical Sciences, New Delhi

Background: Graying of overall word population is common phenomena. Many developed countries are already in red zone in this regard. As elderly population increasing day by day many chronic diseases and other morbidities are also on rise. Many studies pointed out that depression in older generation is highly prevalent.

Aim: to find correlation between depressive symptoms in older persons with their instrumental activities of daily living.

Method: A quantitative cross sectional survey approach was used. One hundred older persons were enrolled using convenient sampling method. GDS-15 (Geriatric depression scale) ($r=0.964$) & Lawton instrumental activities of daily living scale.

Results: In 100 subjects mean age was 65.5 ± 6.6 years. Almost all female subjects were housewives and half of the male were in retired category. One fifth of them were widowed, half were illiterate, 64% belonging to low income group. 15% of subjects didn't know how to handle telephone and could not handle their finances. Almost one fifth of the subjects could not shop alone, prepare food and travel alone. The overall median score of depression scale was 6 (iqr 4), which is suggestive of depression. An inverse correlation was found between depressive symptom scores and activities of daily living of older persons ($r=0.53$ & $p=0.001$).

Conclusion: Depressive symptomatology is very high in study subjects, therefore, their activities of daily living are adversely affected, as evidenced by poor instrumental activities score. There is need to assess depressive symptoms and treat appropriately so that wellbeing of older persons can be enhanced.

GDS 5: Definitely a better screening tool than GDS15

Shubham Prasad, Priyanka Singh, Anand, S.S. Chakrabarti, I.S.Gambhir

Institute of Medical sciences, Banaras Hindu University, Varanasi

Introduction: Point prevalence of depression in elderly Indian population shows a high variability. GDS15 is the most commonly used screening tool but tools which are shorter, reliable and more effective than the GDS15 are required. GDS 5 is a promising such tool whose use in daily clinics requires validation in larger population. There is lack of data in India and abroad on validity and use of GDS5 as a screening tool. This study aims to compare the validity of GDS5 and GDS15 as a screening tool for major depression.

Material and methods: This was a cross sectional study in which 1056 eligible elderly patients and elderly attendants coming to geriatric outpatient department were screened for depression using GDS15 and GDS5 independently. Diagnosis of major depression was made by DSM-IV criteria using doctor administered PHQ-9 Questionnaire at a standard cutoff ≥ 10 . Statistical analysis was done using SPSS software version 16.0.

Results: Prevalence of depression using GDS15 and GDS5 screening scale were almost similar with percentage of 48.2 and 47.6 respectively. GDS15 and GDS5 at their standard cutoff values had sensitivity of 88.03% and 100%, specificity of 56.81% and 58.94%, negative predictive value of 97.45% and 100%, positive predictive value of 20.24% and 23.26% respectively. From ROC curve, the cutoff value of GDS15 and GDS5 was 7 and 1 respectively for major depression.

Conclusion: GDS5 is better than GDS15 for screening major depression. GDS15 requires a modification in the existing standard cutoff value for screening major depression.

- **Serum Tau protein as a early biomarker of Cognitive impairment in Elderly**

SK Yadav, P Chatterjee, A Chakrawarty, S Dey, A B Dey

*Departmenta of Geriatric Medicine, Biophysics,
All India Institute of Medical Sciences, New Delhi*

Introduction: Tau deposition in cortex has been shown to be closely related to cognition, predominantly memory decline, in post-mortem studies of both aging and AD.

Method: Patients attending Memory Clinic of the Department of Geriatric Medicine were evaluated for their cognitive symptoms with MMSE and MOCA scoring systems. Dementia related to Vascular, Metabolic, Depression, other degenerative causes (eg. Parkinsonism) were excluded. A total of 50 selected subjects underwent further cognitive evaluation in the form of CDR, imaging evaluation that included MRI scan and PET scan [18 FDG and 18F T807 (TAU)]. Blood samples were analysed for tau and phosphorylated-tau proteins. Study subjects were divided into 3 categories: Normal Controls, Mild Cognitive Impairment and Probable AD (Based on NINDS-ADRDA criteria) using Clinical scores (MMSE) and MRI (Visual Rating Scales- Medial Temporal Atrophy Score and Koedam score for Parietal Atrophy).

Result: Mean 18F T807 (TAU) binding as measured by SUVmax of different neocortical regions among the groups showed an increase binding with decrease in cognition but with notable overlap among the groups. Binding, particularly in posterior cingulate area, of the Tau showed increase binding which was statistically significant ($p < 0.05$). Blood markers in the form of serum tau and phosphorylated tau was evaluated among the groups which showed an increasing trend with decline in the cognition but the values were not statistically significant ($p = 0.19$ and $p = 0.20$ respectively).

Conclusion: Serum tau and p tau correlates with the cognitive status.

- **Urinary incontinence in the geriatric population: Impact on quality of life**

Sumitabh Singh, N N Prem, Mitali Bhardwaj, A Chakrawarty, P Chatterjee, AB Dey

Department of Geriatric Medicine, All India Institute of Medical Sciences, New Delhi

Introduction – Urinary incontinence is a common in old age. Limited research has been carried on this genito-urinary health issue in India.

This symptom often goes under-reported. Urinary incontinence is associated with distinct impact on the individual, caregiver and the health system. This single center study was carried out to: 1) assess the type and severity of urinary incontinence among older patients; 2) assess the impact of urinary incontinence on quality of life.

Methodology- In this cross sectional observational study, 608 patients were recruited from Geriatric Medicine OPD and Ward. They were subjected to a pre-designed semi quantitative questionnaire to determine the frequency of urinary incontinence in older people and its impact on various aspects of their life using of symptom specific as well as generic instruments.

Results- Stress incontinence was most common in females and urge incontinence was common in males. Certain patients also had mixed incontinence. There was significant impact on quality of life due to incontinence and various modes of management. Urinary incontinence detection is essential, as it can lead to increased dependence. The interventions vary according to the type.

Conclusion- Urinary incontinence is an important geriatric syndrome. Early detection, quantifying severity and targeted intervention can help in improving quality of life of the elderly.

Key words- Urinary incontinence, quality of life.

- **Quantitative and Qualitative Study of Lower Extremity Muscle Function In Older Adults In Indian Scenario**

Sunny Singhal, A Chakravarty, A B Dey.

Department of Geriatric Medicine, All India Institute of Medical Sciences, New Delhi

Introduction: Evaluating of functional mobility test plays a valuable role in clinical geriatrics as well as in ageing research. It has been suggested that lower extremity muscle power is more important for physical function in older adults compared to strength. But studies in Indian elderly are limited. A Cross-sectional study is being carried out on 100 patient's ≥ 65 years attending Geriatric OPD is being conducted. The objectives are to assess lower extremity muscle strength and power in older adults by clinical, radiological and physiological measures and to assess quality of life associated with impaired functional status. Patients will be assessed with Short physical performance battery, Berg Balance scale (BBS), Barthel's Activity of Daily Living (BADL) and Instrumental Activity of Daily Living (IADL), Grip

strength Hand Dynamometer and Older people's Quality of Life Questionnaire (OPQOL). To assess sarcopenia surface EMG and DEXA scan will be used. The study is undergoing as of now and the results will soon be published.

• **Is Memory Retraining Effective in Alzheimer Disease? A Clinical View**

Swati Bajpai, Manjari Tripathi, A.B Dey, Ashima Nehra

Clinical Neuropsychology, Neurology & Geriatric Medicine All India Institute of Medical Sciences, New Delhi

Background: Studies support the evidence that memory retraining is effective in Alzheimer disease (AD), to strengthen the pharmacological treatment to delay the progression of dementia. However, still the efficacy of the non-pharmacological therapy is questioned, if it lacks any support of clinical or radiological findings.

Aim: to study the association between the pharmacological and non pharmacological interpretation on the effectiveness of the memory retraining in Alzheimer disease.

Methods: forty three patients with mild AD treated with Standard pharmacological treatment ('cholinesterase inhibitors' for more than two months) were randomly allocated to study group (n=21) and control group (n=22). The study group received memory intervention for 8 weeks. All the patients were assessed at 3 time points, baseline, 2 months and 3 months on two criteria: first, through cognitive tests namely, Post Graduate institute of Memory test (PGI-MS) which included 10 memory domains, namely; remote & recent memory, attention, immediate & delayed recall, simple memory, new learning ability, visual retention and recognition; and Instrumental Activities of Daily Living (IADLs). Secondly, through the medicine dosage record at the 3 time points mentioned above.

Results: Agreement between psychological tests and the medicine dosage for memory domain at 2 month was 50.00% for the study group & 47.62% for the control group (Kappa statistic = 0.042 vs. -0.08 respectively). While at 3 months, there was agreement of 43.75% for the study group and 40% for the control group Kappa statistic = <0.001 vs. -0.238 respectively). Similarly, for ADLs the agreement at 2 month was 75.00% for the study group & 54.55% for the control group (Kappa statistic = 0.507 vs. -0.238 respectively). While at 3 months, there was agreement of 42.86% for the study group and 26.67% for the control group Kappa statistic = -0.13 vs. 0.19 respectively)

Conclusion: the results of the memory retraining interpreted by the psychological tests are in line with the clinical interpretation which shows that the non pharmacological intervention is as good as any other pharmacological therapy for retraining memory in Alzheimer's disease.

• **Bariatric surgery in geriatric populatng for active ageing**

Varsha Male Jayar, Shashank Shah

MGM Medical College, Navi Mumbai

Obesity causes serious medical complications and impairs quality of life. Moreover, in older persons, obesity can exacerbate the age-related decline in physical function and lead to frailty. However, appropriate treatment for obesity in older persons is controversial because of the reduction in relative health risks associated with increasing body mass index and the concern that weight loss could have potential harmful effects in the older population. Until better medical management becomes available for the severely obese older patient, bariatric surgery appears to be a reasonable and effective treatment. Gastric bypass has been shown to be more effective than gastroplasty. Now that it is possible to perform the gastric bypass laparoscopically with a lower risk of wound complications, including major wound infections and incisional hernias, we think that it is the procedure of choice in older patients. However, it is extremely important that surgeons performing this procedure have both adequate training and a commitment to the long-term care of these patients. The database of patients who had undergone bariatric surgery since 2000 who were more or equal than 60 years of age. Bariatric surgery was the procedure of choice. Data evaluated at 1 and 5 years included weight lost, % , weight lost (%WL), % excess weight loss (%EWL), % ideal body weight (%IBW), mortality, complications, and obesity comorbidity.

• **Study of awareness about health promotion in community dwelling elderly, Jodhpur, Rajasthan**

Vibha Joshi, Arvind Mathur, K R Haldia, Archana Patni, Harish Agarwal

Lachoo Memorial College of Sciences & Technology, Asian Centre for Medical Education, Research & Innovation, Regional Geriatric Centre, Jodhpur

Introduction: As individuals live longer, health promotion behaviors become more important, particularly with regard to maintaining

functional independence and quality of life. The purpose of this study was to explore the health promotion behaviors in community dwelling elderly of Jodhpur, Rajasthan.

Material & Methods: We used EASY-Care Standard 2010 to evaluate awareness about health promotion in community-dwelling elderly in Jodhpur, India in 2016. EASY-Care is a comprehensive and valid needs assessment tool for the older persons used to provide population-level data.

Result: Total 319 elderly (age \geq 60) who consented to participate were interviewed. Out of total (n=319) 160 (50.15%) were female and majority of females 126 (78.7%) were housewives. 56.34% percent has no habit of regular exercise and 68.3% were not bothered about their weight. 41.7% never checked their blood pressure and 90% were unaware about vaccination. 13.5% and 5.6% were involved in smoking and taking alcohol respectively. 33.6% and 52.5% of elderly self perceived their health as "good" and "fair" respectively. Only 28% has no physical pain and 67.4% has troubled sleep. 28% has problem in eating. We found a significant association between the problem in eating of elderly people and their general health ($X^2=20.9284$)

Conclusions: There is paucity of health promotion programs for Indian elderly and little is known about the degree of health promotion behaviors of elderly. This study showed low degree of health promotion behaviors among community dwelling elderly of Jodhpur. Health promotion behaviors could be seen as key for successful ageing; therefore formal health promotion interventions which will maintain and increase a healthy and active life of elderly are needed for successful ageing. We also explored eating efficiency and general health status of community dwelling elderly and found that strong association exists between the problem in eating of elderly people and their general health. With the increasing prevalence of eating problems among older adults, it's important to recognize the symptom and learn how to help care for these aging patients.

- **Assessment of sarcopenia in the elderly presenting to the geriatric outpatient department in a tertiary care hospital in south India**

Rishal Rahman, Surekha

Department of Geriatric Medicine, Christian Medical College, Vellore

Introduction & objectives: 1) To estimate the prevalence of sarcopenia in study population

along with demographic profile of the subjects with sarcopenia. 2) To analyze whether Vitamin D deficiency, lack of dietary protein and exercise is associated with sarcopenia in the study population.

Methods: The study was conducted in Geriatric medicine OPD in Christian Medical College Vellore from January 2015 to august 2015. The subjects were recruited for the study according to the EWGSOP (European Working Group on Sarcopenia in Older People) diagnostic algorithm. Subjects who were recruited for the study underwent muscle strength assessment by hand dynamometry and muscle mass assessment by DEXA. The demographic profiles, comorbidities, dietary pattern, exercise and 25 hydroxy vitamin D levels were also done.

Results: Among 5802 patients who visited Geriatric outpatient clinic, 146 subjects were recruited, 4 subjects did not complete the study protocol. It was found that, out of 142 subjects 54 (38%) had sarcopenia. Sarcopenia was found more among men (43.1%) than females (23.7%). Sarcopenic subjects had a mean BMI of 21.96 ± 2.7 kg/m² ($p < 0.01$). Severe vitamin D deficiency was seen among 12.9% of the sarcopenic subjects ($p = 0.1$). Majority of the sarcopenic subjects (males) had a diet deficient in proteins ($P = 0.019$). Twenty-five sarcopenic subjects (46.3%) had associated osteoporosis ($p < 0.01$).

Conclusion: The prevalence of sarcopenia was 38%. The mean (SD) BMI was 21.96 ± 2.7 kg/m². Men were more sarcopenic than women. In most of the sarcopenic men, diet was deficient in protein. Severe vitamin D deficiency was seen among 12.9% of the sarcopenic subjects.

- **A survey to assess depression in elderly population and find out its association with their activities of daily living, in elderly coming to geriatric OPD AIIMS New Delhi**

Geetanjali, Manphool Singh, Dr Sandhya Gupta, Laxmi Kumari

College of Nursing AIIMS New Delhi

Background Mental and behavioural disorders are estimated to account for 12% of the global burden of disease which affects approximately 450 million people. Due to advances in medical sciences elderly population is increasing and their co-morbidities too. India is second most populated country having high elderly population to be cared for. The overall prevalence of depressive disorders among the elderly generally values between 10-20%.

Aim A survey to assess depression in elderly population and find out its association with the self efficacy

Method A quantitative cross sectional survey approach was used. One hundred elderly subjects were approached using different scales to measure depression (geriatric depression scale $r=0.964$), health status and scale for measuring generalized self efficacy ($\alpha =0.82-0.93$, $r=0.76-0.90$) along with their selected demographic variables.

Results In 100 subjects socio-demographic data shows mean age of the subjects were 65.5 ± 6.6 years. Equivalent numbers of subjects were from both genders. Almost all female subjects were housewives and half of the male were in retired category. Most of them belonging to Hindu religion and were from urban background. One fifth of them were widowed and rests of them were living with spouse. Half of them were illiterate, 64% belonging to low income group. 30-33% of subjects agreed to nearly true statement that they manage to solve difficult situations, can find means and ways if someone opposes them, stick to their goals and confident to deal with unexpected events. 40% of subjects believed that it is true to some extent only that they have good resource fullness and know how to handle unforeseen situations. Most subjects believed that it is nearly true that they can solve most problems, remain calm in difficult situations, and find out alternatives for a problem. The overall median score of depression scale was 6 (iqr 4) which is suggestive of depression. The correlation between depression and self efficacy found to be negatively correlated. ($r=-0.596$) ($p=0.001$)

Conclusion There was inverse relationship between self efficacy and depressive symptoms scores of study subjects. It is suggested that elderly have become less confident and show no interest in their well being due to depressive symptoms. Hence they should be referred for appropriate treatment so that they can also improve in their self efficacy and remain independent.

- **A study to determine the prevalence and risk of frailty using the Timed Up and Go test at a teaching hospital in Kerala, India**

Georgie Rajan George,
Steve Paul Manjaly

Jubilee Mission Medical College and Research Institute, Thrissur, Kerala

Introduction: Frailty is a common clinical syndrome in older adults, which carries an increased risk for falls, incident disability,

hospitalization, and mortality. The TUG (Timed Up and Go) test can be used as a measure of frailty. A score of ≥ 13.5 seconds is used as a cut-off point to identify those at increased risk of falls.

Objectives: 1. To determine the prevalence of frailty, using the TUG test, among the patients attending the Geriatric Medicine outpatient. 2. To determine the relationship of the TUG test with depression, cognition and falls.

Methodology: The study was conducted among 162 outpatients aged ≥ 65 years who visited the Geriatric Medicine outpatient clinic of Jubilee Mission Medical College, Thrissur, Kerala, between August 2015- 2016. Cognition and depression were assessed using the Mini Cog assessment tool and the GDS-15 respectively. Falls history was ascertained by direct interview. The TUG score was compared with the depression, cognition, falls risk and assessed for any statistical association. The data obtained was assessed using the SPSS v 16.

Results: 74 (45.7%) of the 162 patients had a slower gait speed as assessed by the TUG score. Majority of these ($n=36$, 50.7%) were elderly women. Higher TUG scores were significantly associated with depression ($n =16$, 64%, $p < 0.05$), poor performance on balance tests, and a higher risk for falls.

Conclusion: The study emphasizes on the need for gait assessment in geriatric patients. It can serve as a surrogate marker of frailty and poor clinical outcome.

- **Collaborative Multicentric Clinical Trial To Study The Effect Of Ayush Rasayana (A&B) On Ageing In Apparently Healthy Elderly Subjects**

Sakshi Sharma, Pallavi Mundada, Sunita, Bharti, A B Dey

Central Ayurveda Research Institute for Cardiovascular Disorders, Department of Geriatric Medicine, AIIMS, New Delhi

Introduction: Rasayana is broadly the category of drugs that act as rejuvenating agents and ultimately promote health, physical fitness and endurance. Numerous Ayurvedic formulations called Rasayana are being used in India for thousands of years. This on-going clinical trial assesses the efficacy and safety of one such formulation Ayush Rasayana, which is prepared by Central Council for Research in Ayurvedic Sciences. The clinical trial of AYUSH Rasayana A and B is being carried out at three centres in India.

Methodology: Eighty apparently healthy volunteers between 60-75 years without any major health issue are being included in this study. After systemic cleansing with Ayush Rasayana 'A' for initial 6 days, Ayush Rasayana 'B' is administered twice daily for next 6 months. They are subjected to detailed clinical and biochemical assessment before entry into the study and at 37th, 97th and 180th days. Six-minute walk distance and quality of life using WHOQOL-BREF questionnaire are used as parameters of efficacy. The subjects are permitted to continue the previous medication if any and to access modern system of medicine for any acute health problem.

Conclusion: This study is aimed to prove if the improvement in six-minute walk distance and quality of life is significant due to administration of AYUSH Rasayana A and B and whether this drug seems to positively affect ageing process.

- **Prevention of falls in elderly**

Manasi Shaan

India as the second most populous country in the world has 76.6 million people at or over the age of 60, constituting above 7.7% of total population. 80% older people will be living in developing countries by 2050. Kerala has listed the highest

proportion of elderly among all the states. **Risk factors of falls:** Risk factors for falls include muscle weakness, a history of falls, arthritis, impairments in gait, balance, cognition, vision, and activities of daily living. **Consequences of falls:** Falls lead to 20% to 30% of mild-to-severe injuries, and are the underlying cause of 10% to 15% of all emergency department visits. **Economic costs of falls:** One third of Indian older adults aged 60 years and older live below poverty line. private sector employees may not necessarily receive pension and retirement benefits. Fall-related injuries may affect a person's savings, increase the economic burden of caregivers, and contribute to neglect of older adults. **Prevention of falls:** Awareness is critical for the success of fall prevention programmes. Assessment of fall risk factors is important to develop effective fall prevention programmes. Assessment of the home and bathroom for hazards is important. Detailed documentation of the fall event, consequent injuries, and management is important. Yoga can improve balance and gait. Home and bathroom modifications (use of non-skid mats or flooring, bidirectional doors, improved ventilation) are important. Fall prevention must be emphasised in public health policies and health programmes for elderly people.