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Background.– In the period 2009–2011, the Services and Health for Elderly in Long TERM care (SHELTER) study has been conducted to assess nursing home (NH) residents across different health care systems in seven European countries and Israel. Despite high prevalence, little is known about diabetes care and associated health conditions in NH residents with diabetes mellitus (DM). The aim of the study was to describe prevalence of DM, health and functional characteristics of diabetic residents, and to analyse their care provision.

Methods.– The multidimensional InterRAI LTCF instrument was used to longitudinally collect data for 4037 residents aged 60 or more admitted to 57 NHs participating in the study. Selected health and functional status variables were analysed and health care service and procedures reviewed at baseline. Descriptive statistics were used.

Results.– Prevalence of DM among NH residents was 21.8%. Compared to non-diabetic resident diabetics were significantly younger, more frequently overweight or obese, had coronary heart disease, congestive heart failure, stroke, worse self-perceived health, took more drugs, developed bedsores or other wounds ($P < 0.001$). They used more wound care, and rehabilitation services and were more frequently hospitalized. Preventive procedures were applied in diabetic residents more often, yet rates of yearly eye exam, pneumococcal vaccination did not meet DM management recommendations.

Conclusions.– Prevalence of DM in NH residents is high with high level of medical complexity accompanied by polypharmacy. NH residents with DM receive more frequently care related to DM complications/co-morbidities; nevertheless, overall recommended amounts of care are not met.

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O 020

Inverse relationship between TSH and mortality in euthyroid elderly subjects



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Introduction.– An increased mortality has been demonstrated in elderly subjects affected by thyroid dysfunction. Little is known on the relationship between mortality and TSH in elderly euthyroid subjects. The aim of this study was to evaluate the relationship between TSH and either all-cause and CV mortality in elderly euthyroid subjects.

Methods.– We studied ($n=819$) euthyroid subjects aged 65 or older subjects who participated in the Aging in the Chianti Area (InCHIANTI) study. Plasma levels of thyrotropin (TSH), free triiodothyronine (FT3), and free thyroxine (FT4) were evaluated at the enrolment. Ascertainment of mortality was 100%. The incident events in this report occurred after baseline with a mean duration of follow-up of 6 years. Both all-cause and cardiovascular deaths were evaluated. Kaplan–Meier survival and Cox proportional hazards models adjusted for confounders were used in the analysis.

Results.– All subjects had normal levels of FT3, FT4 and TSH. The multivariate analysis adjusted for multiple confounders, demonstrated that plasma TSH concentrations was independently associated with a reduced risk for all-cause, but not cardiovascular, mortality (HR, 0.76, 95% CI, 0.57–0.99, $P < 0.05$). No significant association between either FT3 or FT4 and either all-cause- or cardiovascular mortality was found.

Conclusions.– These data demonstrate that in euthyroid elderly subjects, circulating concentrations of TSH are independently associated with a reduced risk for all-cause mortality. Elderly subjects with low-normal TSH should be carefully monitored.

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O 021

How laboratory results can occasionally confuse clinicians? – A case report



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Introduction.– We report a case of Peritoneal Tuberculosis in an elderly lady with unusual laboratory results.

Methods/Results.– She presented with low-grade fever, abdominal discomfort and anorexia. She had mild anaemia and raised Erythrocyte Sedimentation Rate. Abdomino-pelvic ultrasonography revealed moderate ascites. Ascitic fluid was exudate with raised fluid Lactate Dehydrogenase (LDH) and Adenosine Deaminase (ADA) levels. Fluid cytology was negative for malignant cells. Ziehl-Nelson staining was negative for Acid-Fast Bacilli. Ascitic fluid PCR-TB assay was negative. Serum CA-125 levels were markedly raised at 311.17 u/ml (normal upto 35 u/ml). Abdomino-pelvic CT-scan was non-contributory. Laparoscopic Peritoneal Biopsy confirmed diagnosis of Peritoneal Tuberculosis. Patient's symptoms improved with anti-tubercular therapy. Most re-assuringly, serum CA-125 levels done 2 months after initiation of anti-tubercular therapy were normal at 09 u/ml. Markedly raised serum CA-125 levels and Negative PCR-TB assay caused diagnostic uncertainty in this case, which was resolved with a correct tissue diagnosis.

Key conclusions.– CA-125, although a marker for ovarian malignancy, is raised in many other non-malignant conditions including Peritoneal Tuberculosis. PCR assay is the ideal method for diagnosing extra-pulmonary mycobacterial infections. However, PCR has “high specificity” and “low sensitivity” and therefore is a good “rule-in” test but should not be used as a “rule-out” test. In all women with ascites, high CA-125 levels should raise suspicion of tuberculosis. These patients should have PCR assay; if this is negative (as in our patient), laparoscopic peritoneal biopsy should be performed for confirmation of diagnosis.

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O 022

Prevalence of vitamin D inadequacy in European postmenopausal women aged over 80 years



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Objective.– Inadequate vitamin D level is associated with secondary hyperparathyroidism and increased bone turnover and bone loss, which in turn increases fracture risk. The objective of this study is

to assess the prevalence of inadequate serum vitamin D levels in European women aged over 80 years.

Material and methods.– Assessment of 25-hydroxyvitamin D [25(OH)D] was performed in 8532 European women with osteoporosis or osteopenia, of which 1984 were aged over 80 years. European countries included France, Belgium, Denmark, Italy, Poland, Hungary, United Kingdom, Spain and Germany. Two cut-offs of 25(OH)D inadequacy were fixed: <75 nmol/L and <50 nmol/L.

Results.– Mean (SD) age of the patients was 83.4 (2.9) years, body mass index was 25.0 (4.0) kg/m². Level of 25(OH)D was 53.3 (26.7) nmol/L. There was a highly significant difference of 25(OH)D level across European countries ($P < 0.0001$) with the lowest level of 25(OH)D found in France [47.7 (26.4) nmol/L]. In these women aged over 80 years, the prevalence of 25(OH)D inadequacy was 88.6% and 53.4% when considering cut-offs of 75 and 50 nmol/L, respectively. In the 397 (20.0%) patients taking supplemental vitamin D with or without supplemental calcium, the mean serum 25(OH)D level was significantly higher than in the other patients (65.2 (29.2) nmol/L vs 50.3 (25.2) nmol/L; $P < 0.001$).

Conclusion.– This study indicates a high prevalence of vitamin D [25(OH)D] inadequacy in old European women. The prevalence could be even higher in some particular countries.

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O 023

Effects of CGA and multicomponent intervention on mobility of pre-frail and frail community-dwelling older people

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Introduction.– Frailty is a condition with a high risk of disability progression, including mobility limitations. The aim of the present study was to assess the effects of comprehensive geriatric assessment (CGA)-based individually targeted intervention on the ability to walk 400 m in pre-frail or frail and non-frail community-dwelling older people.

Methods.– This population-based comparative study the Geriatric Multidisciplinary Strategy for the Good Care of the Elderly (GeMS) was conducted in the city of Kuopio, Finland, from 2004 to 2007. Present analysis included 605 community-dwelling persons aged ≥ 76 years (mean 80.9, 70% women), 314 in the intervention and 291 in the control group in 2005. Frailty status was assessed in 2005 by the criteria of Fried et al. with slight modifications. Mobility was assessed annually by the ability to walk 400 m. The generalized estimating equation model with binary logistic regression was used to assess the treatment effect of the intervention on the ability to walk 400 m between 2005 and 2007.

Results.– In the intervention group 55% ($n = 173$) and in the control group 64% ($n = 187$) of participants were pre-frail/frail in 2005. The intervention prevented the loss of ability to walk 400 m independently among pre-frail/frail persons (OR 0.74, 95% CI: 0.59 to 0.93, $P = 0.01$). The treatment effect was not statistically significant among non-frail participants (OR 0.99, 95% CI: 0.68 to 1.42, $P = 0.94$).

Key conclusion.– CGA-based individually targeted intervention was effective to prevent mobility limitation among pre-frail/frail older people.

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O 024

Which factors are associated with health related quality of life one year after an acute hospitalisation in an elderly patient population?



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Introduction.– Acute hospitalization is a hazardous event for older people. The impact on their perceived health related quality of life (HRQOL) remains unclear. We explored the association between comorbidity, geriatric conditions, and baseline HRQOL on HRQOL outcomes one year after an acute hospitalization in older patients.

Methods.– A prospective multicenter cohort study conducted between 2006 and 2008 in three teaching hospitals in the Netherlands. Medical patients ≥ 65 years, acutely hospitalized ≥ 48 h, were eligible. Eighteen geriatric conditions were assessed at admission, and three HRQOL outcomes (utility scores of the EuroQol-5D (EQ-5D), visual analogue scale (VAS) and quality adjusted life years (QALY)) were also assessed at three months and one year after admission. Linear regression analysis was conducted to identify variables associated with HRQOL outcomes. Utility score at baseline was a covariate in all analyses.

Results.– In total, 535 patients were included, mean age 77.4 years, 46.2% male. The number of geriatric conditions was associated with utility and VAS at one year (respectively B -0.036 , 95% CI -0.05 – 0.02 and B -1.197 , 95% CI -2.01 – 0.38) and this had a stronger effect on HRQOL than individual geriatric conditions. Utility at baseline was associated with utility at one year and QALY (respectively B 0.254, 95% CI 0.15–0.36 and B 0.355, 95% CI 0.23–0.48). Co-morbidity measured at discharge and premorbid ADL functioning were also associated with QALY (respectively B -0.042 , 95% CI -0.06 – 0.03 and B -0.019 , 95% CI -0.03 – 0.01). People who were alive at one year had better utility and VAS scores at baseline (P for both < 0.001).

Conclusion.– HRQOL one year after admission is associated with the number of geriatric conditions and utility at baseline. Baseline HRQOL measured by the EQ-5D could guide patient, family and professionals in the decision making process determining goals to achieve by hospitalisation.

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O 025

Identifying predictors for hospital outcomes of older patients admitted to an acute care ward: A multi-component approach. Results from the CRIME study

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Introduction.– The identification of older patients at risk for poor hospital outcome (e.g. longer hospital stay, in-hospital mortality, institutionalization) is important to provide an effective healthcare service. Aim of the present study is to identify factors associated with poor hospital outcomes in older patients admitted to an acute care ward.

Methods.– The Criteria to assess appropriate medication use among elderly complex patients project was an observational study of 1123 older patients, consecutively admitted to geriatric and internal medicine acute care wards of seven Italian hospitals. Data on demographics, anthropometrics, social factors, cognitive status (Mini Mental State Examination), psychological status (15 items

