

**Communications
to the
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**programme of
abstracts**

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Thursday 8 October 2009

PLATFORM PRESENTATIONS

Session A	09:15 - 10:30	ABSTRACT BOOK NOS	1-5
Session C	14:00 - 15:15		6-10
Session F	15:45 - 17:00		11-15

1

THE CHANGING NAME OF OUR SPECIALTY

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Introduction

There is ongoing concern about how the term “geriatrics” is perceived by others (Latham BGS Newsletter Dec 2008). Specialists in “geriatric” medicine use various titles to describe their specialty to the public and healthcare professionals.

Methods

For six months in 2008 we reviewed the “geriatric medicine” and “medicine” subsections of the BMJ’s classified jobs, recording the departmental or job title for posts with a “geriatric” component. We used the same methodology as Day (BMJ 2001;322:1606), allowing comparison of results. We also telephoned 220 “geriatric” hospital departments, asking secretaries: the title their consultant used in correspondence; the departmental letterhead; and name on the door.

Results

Of 331 posts advertised, 50 different titles were used, compared to 24 terms in 2000. “Geriatric medicine” was used in 18%, “care of the elderly” in 11%, and “medicine for the elderly” in 9%. In 2000 these terms were cited in 21%, 20% and 24% respectively. The survey had a 68% response rate. 16% of consultants used a title including “geriatrics” or “geriatrician”. Only 3% of departments used a letterhead or had a name outside the door including the term “geriatrics”.

Conclusions

Terms used to describe the specialty of “geriatrics” are becoming more diverse. A growing number of titles for a single specialty leads to confusion as to its purpose and function. The BGS needs to again debate whether a unified term may improve the identity of the specialty.

2

CONTROL OF INFLUENZA IN AGED-CARE FACILITIES: A CLUSTER RANDOMISED CONTROLLED TRIAL

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Introduction

Seasonal influenza outbreaks in Aged Care Facilities (ACFs) cause significant morbidity and mortality. We designed a cluster randomised controlled trial to test a policy of active surveillance with two different antiviral policies.

Methods

An active surveillance system for influenza-like illness (ILI) including point of care (POC) testing and laboratory confirmation of infection, was established in 16 ACFs and run over three winters (2006-8). Outbreak definition required at least 2 ILI cases in 3 days or 3 in 7 days, where at least one tested positive for influenza. ACFs were randomised to a policy of either: Treatment Only (TOF) or Treatment and Prophylaxis (TAP) use of oseltamivir, with both residents and staff being eligible for treatment.

Results

Nine outbreaks were detected (6 TAP; 3 TOF). The average duration from intervention to cessation of outbreak was 4.5 days for TAP and 11.3 days for the 3 TOFs. Average outbreak deaths were 1.7 and 3.0 respectively. The average number of cases in TAP ACFs were 15.0 compared with 30.6 in TOFs (p=0.036). In the TOFs, 64/255 residents and 18/216 staff received oseltamivir. In the TAP facilities, 51/397 residents were treated with 267 residents prophylaxed, and 19/361 staff treated with 177 staff prophylaxed.

Conclusions

Both antiviral policies were associated with control of outbreaks. The TAP approach appears more effective but required on average 75 extra prescriptions per outbreak.

3

A QUALITATIVE PILOT STUDY INVESTIGATING KNOWLEDGE AND PREFERENCES OF PARKINSON'S DISEASE PATIENTS, REGARDING ADVANCE DIRECTIVES

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Introduction

The recently published English, End of Life Care Strategy advocates advance care planning, including the completion of Advance Directives (AD). Parkinson's disease (PD) is one condition which can leave patients unable to communicate their health care preferences. This study aims to explore the knowledge and preferences of patients with PD regarding Advance Directives.

Methods

Subjects with confirmed PD were recruited randomly from specialist outpatient settings.

Participants had their disease classified using the Hoehn and Yahr scale (HY), completed a PD quality of life questionnaire (PDQ-39), geriatric depression scale, abbreviated mental test and semi-structured questionnaire designed by the researchers.

Results

76 patients were invited to participate, 19 completed the study. Mean age, 73 years (range 57-88), 53% male, mean HY score, 2.6 (range 1-4). 68% were aware that PD can become severe, 63% that it can affect communication and 42% that it can affect memory. 37% had heard of AD, but 85% had no or inaccurate knowledge. 16% were distressed by the discussions but all accepted further information.

Conclusion

In this study, knowledge regarding AD was poor amongst patients with PD. The majority had insufficient knowledge, but were not distressed by the discussions and found them helpful. Discussions on advance decision planning can be helpful earlier in the disease process and may not cause the distress which physicians may perceive. Further studies in larger populations are needed.

4

DOES ORAL NUTRITIONAL SUPPLEMENTATION REDUCE DISABILITY IN UNDERNOURISHED OLDER PEOPLE AFTER HOSPITALISATION?

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Introduction

It is not known whether oral nutritional supplementation in recently discharged older patients reduces disability and improves muscle function.

Methods

This 2-centre, double blind, controlled trial was conducted in the homes of community dwelling patients aged 70 years or over. Participants were randomised to receive either a nutrient rich supplement (600kcal) or a matching control (200kcal) daily for 16 weeks. Barthel Index (the primary outcome), weight and handgrip strength were recorded at 0, 8 and 16 weeks. Participants wore an accelerometer for 7 days to record activity levels at 0 and 16 weeks.

Results

253 participants (61% female, mean age 82 years) were allocated to oral nutritional supplement (n=126) or matching control (n=127). There was no evidence for a reduction in disability with nutritional supplements, as measured by change in Barthel. Handgrip strength improved more in the supplemented group (mean difference 1.48kg, p=0.005, corrected for gender and baseline values). There was a modest increase in physical activity levels in the nutritional supplemented group (p=0.018) and a trend towards weight increase (p=0.037); both significant when adjusted for adherence (median 38% supplemented group, 50% control group). Approximately 25% of participants reported gastrointestinal side effects.

Conclusions

Oral nutritional supplementation in recently hospitalised older people did not reduce disability, despite improving muscle function and modestly increasing physical activity levels.

5

PREDICT: INCREASING THE PARTICIPATION OF THE ELDERLY IN CLINICAL TRIALS - PROFESSIONALS PERCEPTIONS

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Introduction

The PREDICT Study (www.predicteu.org/) confirms that older people and those with co-morbidity are unjustifiably excluded from clinical trials. This is supported by a systematic review of published studies and review of clinical trials databases. We now report the views of UK professionals on this situation.

Methods

A piloted questionnaire using a 6 point Likert scale and free text, developed by 9 EU countries was completed by sixty UK professionals comprising: GPs, geriatricians, researchers, ethicists, nurses and industry physicians. The questions explored the impact of the present situation, possible reasons for under-representation and potential methods of improving recruitment.

Results

Over 90% of respondents agreed that under-representation caused difficulties for both prescribers and patients and that exclusion on age grounds alone was unjustified. 85% and 73% believed that people with physical or mental health co-morbidities should not be excluded in protocols. However, even with no specified upper age limit it was believed that older people and those with co-morbidity would still not be recruited. Suggested solutions included making inclusion of older people legally obligatory, pre-defining specific numbers and providing increased financial incentive.

Conclusion

There is a general consensus that present arrangements for older people in clinical trials are unsatisfactory. The international results of this questionnaire together with other results from the PREDICT study will be used to construct a charter aimed to improve this situation.

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6

SEASONAL VARIATION OF SERUM VITAMIN D IN IRISH COMMUNITY-DWELLING OLDER PEOPLE

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Introduction

Above 35° North, little Vitamin D (VitD) can be produced in winter. In Ireland (53°), little is known about seasonal variation of serum VitD in older people.

Methods

723 community-dwelling people aged ≥60 (mean age 73.7, 73.7% females) from two outpatient clinics (A: comprehensive assessment, N=456; B: bone health, N=267). Patients were recruited over seven consecutive seasons (autumn 2007–spring 2009). Monthly global solar radiation data (Dublin) were downloaded from www.met.ie.

Results

In N=723, season (p=0.001) was a significant predictor of VitD after controlling for age (p=0.310), gender (p=0.300), clinic (p=0.535) and VitD supplementation (p<0.001). Overall, the pattern of VitD variation paralleled that of the global solar radiation recorded over the period. On average, supplemented subjects (N=308) had higher VitD levels (95% CI 62.6–70.2) than non-supplemented subjects (N= 415, 32.6–39.2), with identical seasonal variation. Summer 2008 (sunniest season) had the highest VitD averages, 71.5–87.3 in the supplemented (N=69) and 36.1–48.0 in the non-supplemented (N=73). In winter 2007, mean levels for supplemented (N=34) were 54.6–73.0 versus 20.1–34.7 for non-supplemented (N=62).

Discussion

VitD supplementation raised serum VitD levels significantly, about 30 units on average. Only those taking supplements during the sunniest season got close to a normal level (≥80). Non-supplemented people were insufficient all year round, and close to deficiency in winter. There is a case for universal, seasonally-adjusted VitD supplementation in Irish older people.

7

IS GRIP STRENGTH A GOOD MARKER OF PHYSICAL PERFORMANCE IN COMMUNITY-DWELLING OLDER PEOPLE?

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Introduction

Grip strength is a key marker of sarcopenia, the loss of muscle mass and strength with age. Sarcopenia has important adverse consequences for health in terms of increased disability, morbidity and mortality. It is also associated with declining physical performance. Grip strength may therefore be a marker of physical performance as well as sarcopenia in older people.

Aims

To examine associations between grip strength and components of the short physical performance battery.

Methods

Grip strength measurement and a short physical performance battery were completed in 349 men and 280 women aged 63–73 years taking part in the Hertfordshire Cohort Study (HCS). Multiple regression analyses were carried out to explore the relationships between maximum grip strength and physical performance measures including 6m timed-up-and-go (TUG), 3m walk speed, chair rises and flamingo stands. Results were then adjusted for age, size, lifestyle factors and co-morbidities.

Results

A kilo increase in grip was associated with faster 6m TUG (-0.07seconds[s], p<0.001 men; -0.13s, p<0.001 women), 3m walk (-0.02s, p<0.001 men; -0.03s, p<0.001 women) and chair rises times (1% decrease, p<0.001 men and women) and reduced likelihood of poor balance in men (odds ratio=0.95, p=0.01). Adjustment made little difference to these values.

Conclusions

Grip strength appears to be a good marker of physical performance in this age group and may be more feasible than completing a short physical performance battery in some clinical settings.

8

A NEW FRAILITY MEASURE: ASSOCIATION WITH SURVIVAL IN OLDER PEOPLE

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Introduction

Frailty can be described as a latent vulnerability in older adults. We present an internally reliable model-based measurement of frailty and evaluate its performance in assessing the longterm survival of community-dwelling older people.

Method

The British Women’s Heart and Health Study (BWHHS) cohort of 4286 women aged 60-79 years from 23 towns in Britain provided 35 frailty indicators. Factor analysis was used to develop and test the frailty hypothesis using latent variables as means of data reduction, resulting in a score (range -1.2 to 2.4). Cox regression was used to investigate risk associated with the frailty index adjusted for age, socioeconomic status, demographic and lifestyle variables. This process was replicated in the MRC Assessment study of older people, 11195 people aged >75 years from 53 general practices in Britain.

Results

Seven factors explained the association between frailty indicators: physical ability, cardiac and respiratory symptoms/disease, physiological measures, psychological problems, co-morbidities and visual impairment. In BWHHS, the association of frailty with mortality was 1.83 (95% C.I. 1.70, 1.97) per unit of score, p<0.001 and 1.51 (95% C.I. 1.41, 1.62), p<0.001 when fully adjusted. In the MRC assessment study, frailty doubled the mortality rate per unit score in the first 2 years of follow-up in both sexes, but this hazard rate was reduced with increasing length of follow up.

Conclusion

This multidimensional measure identified seven key factors associated with frailty, demonstrating good survival prediction amongst well represented community elders.

9

EFFECT OF SMOKING ON FRAILITY IN OLDER ADULTS

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Introduction

Though smoking has adverse effects on a variety of organ systems, smokers commonly believe that those who do not die have physiological advantages that confer increased fitness.

We aimed to explore the relationship between frailty and smoking in older people.

Methods

Data came from Wave 1 of the English Longitudinal Study of Ageing (ELSA, 2002), a nationally representative panel study of community-dwelling adults aged 65 and over in England. Frailty was defined by an index of deficits, with higher values indicating a greater number of problems (and hence greater frailty) and lower values indicating fewer problems (greater fitness). Smoking status was based on self report and participants categorized as never having smoked cigarettes, having quit smoking or being a current smoker.

4248 participants had complete data. Analyses were adjusted for age, sex, education, wealth and body mass index.

Results

Those who had never smoked were fittest (mean Frailty Index 0.127; 95% CI 0.125 to 0.130) and current smokers were frailest (mean FI 0.139; 0.135 to 0.143). There was evidence to suggest a dose response: ex-smokers had intermediate frailty (mean FI 0.134; 0.132 to 0.136).

Conclusions

Smoking causes poorer health status at older ages which can be captured by the Frailty Index approach. Since cigarette smoke is a powerful inflammatory stimulus and smoking impairs muscle protein synthesis, there may be direct causal links between smoking and frailty development.

10

PREVENTION OF POTENTIALLY INAPPROPRIATE PRESCRIBING IN LATE LIFE USING STOPP (SCREENING TOOL OF OLDER PERSONS' PRESCRIPTIONS) AND START (SCREENING TOOL TO ALERT TO RIGHT TREATMENT): A RANDOMIZED CONTROLLED TRIAL

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Introduction

Potentially inappropriate prescribing is common in older patients and is associated with adverse drug events and hospitalization. We aimed to determine if clinical implementation of STOPP/START criteria improves prescribing quality in hospitalized older patients.

Methods

400 patients aged ≥65 years admitted to the general medical service of a university hospital were randomized to receive usual hospital care or application of STOPP/START criteria by a research physician with written recommendations to the medical team. Prescribing quality was measured on admission, discharge and 2, 4 and 6 months post-discharge using Medication Appropriateness Index (MAI) and Assessment of Underutilization of Medication (AUM) tools.

Results

Baseline characteristics were similar in both groups: median age (interquartile range) 76(71–81) years; median medications 7(5-10); median MAI control 8(3-17.75) and intervention 10(3-16.25) (p =.886). At discharge, MAI scores had not changed significantly in control patients (median 8(3–17), p =.144; r = -.07) but were lower in intervention patients (median 3(1-6), p <.001; r = -.52) and remained lower during follow-up (X²(df4)226.4, p <.001). Unnecessary drugs and potential drug-drug and drug-disease interactions were lower in intervention patients at discharge and follow-up (p <.001). Under-use scores were 37.5% (control) and 36% (intervention) on admission (p =.531), 33.3% and 2.6% respectively on discharge and sustained during follow-up (p<.001).

Conclusion

Clinical application of STOPP/START criteria to hospitalized older patients improves prescribing quality, reduces unnecessary drugs and reduces prescribing omissions.

11

DOES VITAMIN D SUPPLEMENTATION IMPROVE EXERCISE CAPACITY AND QUALITY OF LIFE IN OLDER HEART FAILURE PATIENTS? A RANDOMISED CONTROLLED TRIAL

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Introduction

Both vitamin D insufficiency and heart failure are common in older people. Vitamin D is known to have beneficial effects on skeletal muscle, vascular and inflammation, and thus could provide a novel way of improving the impaired exercise capacity seen in older heart failure patients.

Methods

Randomised, placebo controlled, double blind trial. Patients aged 70 and over with symptomatic heart failure, left ventricular systolic dysfunction and baseline 25-hydroxyvitamin D levels <50nmol/L received 100,000 units oral vitamin D2 or placebo at baseline and 10 weeks. Six minute walk distance, timed get up and go test, quality of life (Minnesota score), subjective function (Functional Limitation Profile) and daily activity (accelerometry) were measured at baseline, 10 and 20 weeks.

Results

105 patients were randomised, mean age 79.7 years; 69/105 (66%) male. 25-hydroxyvitamin D levels increased by 21nmol/L in the intervention arm relative to placebo ($p < 0.001$). Six minute walk distance did not increase in the intervention arm relative to placebo (-5.6m, 95% CI -22.2 to 11.0m at 20 weeks; $p = 0.51$). No significant changes in subjective function, daily activity or timed up and go were noted between the groups. Quality of life worsened in the intervention arm at 20 weeks relative to placebo (5.3 points, 95% CI 0.5 to 10.2; $p = 0.03$)

Conclusion

Vitamin D supplementation does not improve exercise capacity or quality of life in older heart failure patients with vitamin D insufficiency.

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THE RELATIONSHIP BETWEEN CEREBRAL AUTOREGULATION AND SYMPTOMS IN OLDER INDIVIDUALS WITH CAROTID SINUS HYPERSENSITIVITY

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Introduction

Carotid sinus hypersensitivity (CSH) has been reported in 35% of asymptomatic community-dwelling older people. We determined the integrity of cerebral autoregulation (CA) in asymptomatic individuals with and without CSH from the above cohort, and patients diagnosed with symptomatic CSH at a specialist unit.

Methods

Bilateral middle cerebral artery blood flow velocities (CBFV) were measured using transcranial Doppler ultrasound. A systolic blood pressure drop of 50mmHg was induced using graded lower body negative pressure. Within group comparisons between cerebrovascular resistance (CVR=mean arterial pressure/CBFV) at baseline and nadir were performed using paired t-tests.

Results

Forty-nine participants were recruited to our study (22 symptomatic CSH, 17 asymptomatic CSH, 10 non-CSH controls). There was no significant difference between CVR at baseline and nadir for participants with symptomatic CSH (right=2.7vs2.9 mmHg/cm/s; $p = 0.121$ and left=2.9vs3.3; $p = 0.06$) or non-CSH controls (right=3.0vs3.1; $p = 0.629$ and left=3.1vs2.9; $p = 0.288$). Participants with asymptomatic CSH had significantly lower CVR at nadir compared to baseline (right=2.6vs2.2; $p = 0.005$ and left=3.1vs2.8; $p = 0.025$).

Conclusion

In order to maintain cerebral blood flow during hypotension, a reduction in CVR should occur. Cerebral autoregulation is therefore intact in subjects with asymptomatic CSH, while subjects with symptomatic CSH and no CSH appear to have impaired CA. Our findings indicate that impaired CA may be a contributing factor converting asymptomatic to symptomatic CSH, but also suggests that individuals without CSH remain asymptomatic despite the presence of impaired CA.

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CEREBRAL MICROVASCULAR DAMAGE IN LATE-LIFE DEPRESSION IS ASSOCIATED WITH STRUCTURAL AND FUNCTIONAL ABNORMALITIES OF SUBCUTANEOUS SMALL ARTERIES

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Introduction

Late-life depression is increasingly viewed as a vascular illness with patients exhibiting characteristic white matter brain lesions and in-vivo endothelial dysfunction. Although the 'vascular depression' hypothesis pertains to the microvasculature, this circulation has yet to be studied.

Methods and Results

25 patients aged 72.6±5.4 years with late-life depression were compared with 21 control participants aged 72.4±6.5 years. Groups were matched for blood pressure, glycaemia, lipids, co-morbidities and treatment with statins and agents modifying the renin-angiotensin axis. Patients underwent MRI brain scan and a matched subset underwent subcutaneous gluteal fat biopsy (15 patients and 15 control participants) from which small arteries were isolated and studied using pressure myography. Depressed patients showed evidence of cerebral microvascular damage (MRI scan): Virchow Robin Scores- Patients:3.88±1.45 vs Controls:2.76±1.55,p=0.01. Small artery studies demonstrated endothelial dysfunction (Percentage relaxation: Patients:82±4% vs Controls:96±1.5%, p<0.05) which was not completely explained by reduced nitric oxide synthase bioavailability. Contractility to Noradrenaline was equivalent between the groups. There was also abnormal hypertrophic wall growth in depressed patients (Medial Cross sectional area: Patients:13294µm²vsControls:10555 µm²,p<0.05, Growth Index:26%), but no difference in arterial distensibility.

Conclusions

Despite identical cardiovascular profiles, patients with late-life depression show profound abnormalities in structure and function of small arteries, suggestive of deficiencies in local autoregulation. Although the arteries taken were from subcutaneous fat, our findings support a cerebral microvascular pathology in this condition.

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CLINICAL CHARACTERISTICS AND PRODROME OF VASOVAGAL SYNCOPE (VVS) IN YOUNG AND OLD

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Introduction

Vasovagal syncope(VVS) affects 40% of individuals in their lifetime and accounts for 20% of syncope in older adults. Presentation differs greatly between young and old. We prospectively studied prodrome and presence of amnesia in those who had reproduction of symptoms on head-up-tilt (HUT) table testing.

Method

Questionnaires were completed by individuals (n=400) presenting with unexplained falls/syncope in 9 months. In those who proceeded to lose consciousness with HUT, a protocol of questioning occurred immediately after and prior to leaving the clinic to establish presence of amnesia for loss of consciousness.

Results

94 had an end diagnosis of VVS confirmed with symptom reproduction on HUT. 35/94 (37%) were > 60 years, 63/94(67%) were female. 87% < 60 years (n=48) experienced warning pre syncope compared to 75% > 60 years (n=21). Prodromal symptoms included sweating (p=0.06),palpitations (p=0.03), dizziness (p=0.09) heat sensation (p=0.05) chest discomfort (p=0.023) and hearing disturbance (p=0.06). Venepuncture and stress triggers predominated in those < 60 yrs (p=0.02). 59% (n=55) lost consciousness during HUT, of whom 29% (n=16) had full amnesia afterwards. This was higher in those > 60 yrs, 46% (10/22) versus 18% (6/33) < 60 yrs, p=0.03.

Conclusion

This study illustrates reduced vasovagal warning in older individuals with increased incidence of amnesia for loss of consciousness after the event. VVS should be considered in those with unexplained falls/syncope not found to be cardiac, to reduce risk of injury/morbidity with treatment.

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BODY COMPOSITION AND FUNCTIONAL CONSEQUENCES OF GOAL DIRECTED ANTIHYPERTENSIVE THERAPY IN OLDER PEOPLE WITH CHRONIC KIDNEY DISEASE

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Introduction

Significant CKD is highly prevalent in the elderly and is associated with changes in body composition, including hydration status and alteration in skeletal muscle mass and function. Aggressive BP control is the cornerstone of CKD 3/4 management. We studied prospective changes in body composition and skeletal muscle function in response to the introduction and escalation of antihypertensive therapy (AHT).

Methods

We recruited 61 non-diabetic CKD 3/4 patients aged over 70; and non-CKD hypertensive controls. AHT was fully washed-out before patients underwent whole body DEXA; multi-slice CT thigh; multisegmental, multifrequency bioimpedance analysis (BIA) and performed a Timed Up and Go (TUG) test. BIA and TUG testing were repeated four weeks after AHT was restarted to achieve target BP (130/80).

Results

BIA and DEXA assessed soft lean mass (SLM) and body fat mass (BFM) correlated ($r=0.93, p<0.0001$; $r=0.91, p<0.0001$). CT assessed muscle and fat correlated with both regional (R) and total body (TB) DEXA (R muscle $r=0.71, p<0.0001$; fat $r=0.82, p<0.0001$; TB muscle $r=0.75, p<0.0001$; fat $r=0.53, p<0.0001$). After AHT reintroduction mean BP was 129/69, mean BIA measured extra-cellular water and SLM were lower ($0.2\pm 0.6L, p=0.026$; $0.63\pm 2.13kg, p=0.035$) and BFM was unchanged. There was no change in TUG.

Conclusions

Aggressive management of hypertension in older people is associated with a reduction in SLM but did not seem to effect directed active functional assessment. Further prospective assessment of the global effects of AHT in elderly patients with CKD is ongoing.

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VITAL SIGNS: ARE THEY A MEASURE OF QUALITY OF CARE OR QUALITY OF DATA COLLECTION?

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Introduction

Vital signs are the new approach to evaluating and commissioning health priorities within the National Health Service(NHS). For stroke, this is 'Proportion of stroke patients spending >90% time on a stroke unit'. Data for these indicators is usually obtained from existing hospital information systems(HIS), which is heavily dependent on appropriate coding. We aimed to determine the impact of accurate data collection on this 'topical' vital sign.

Methods

'Stroke' vital sign data for an inner-city region was obtained using the standard HIS. A second dataset of all 'true' strokes was collated, using multiple sources of notification, including detailed analyses of patients identified by HIS, hospital stroke register, and bereavement records to establish figures for true stroke episodes. The two datasets were compared using two-sample proportion tests.

Results

For 9 months in 2008-09, HIS data showed 41.3%(74/179) patients spent >90% on a stroke unit. Detailed analyses showed 31 of these 179(17.3%) were erroneously coded as stroke admissions.

The vital sign from the 'true' dataset was significantly different at 56.3%(126/224) [p=0.003]. Of these 224 strokes, 39(17.4%) had not been coded as strokes on HIS.

Discussion

This survey demonstrates the inadequacies of the HIS that most NHS Trusts use, not only in actual numbers, but also the accuracy of the diagnoses coded. More robust information systems and coding need to be established if vital signs are to be used effectively for NHS operational framework.

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EDUCATION OF WARD STAFF CAN IMPROVE DOCUMENTATION OF DEEP VEIN THROMBOSIS (DVT)/PULMONARY EMBOLUS (PE) RISK ASSESSMENT FOR ACUTELY UNWELL OLDER PATIENTS

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Problem

The Independent Venous Thromboembolism Expert Working Group recommended in April 2007 that a deep vein thrombosis (DVT)/pulmonary embolus (PE) risk assessment should be mandatory for every hospitalised patient on admission. An audit of 50 acutely unwell elderly patients found that this assessment was documented in only 3(6%) resulting in inadequate thromboprophylaxis. We designed strategies to improve documentation and conducted a re-audit.

Design

We retrospectively analysed admission notes and prescription charts of 50 patients selected at random looking for a documented DVT/PE risk assessment during the period 28/05/08 to 06/06/08 and re-audited this from 05/11/08 to 14/11/08 after initiating our change strategy.

Setting

The four acute medical wards for older patients at St.Mary's Hospital, Portsmouth.

Improvement Measures

Increase in patients having a DVT/PE risk assessment documented on admission.

Change Strategies

During September and October 2008 we conducted a rigorous programme of nurse education led by junior doctors who spoke to nurses on each ward about the rationale for improved documentation. We also designed a flow diagram prompting the documentation of DVT/PE risk assessment and prescription of thromboprophylaxis which was placed in each patient's observations folder.

Change Effects

DVT/PE risk assessment documentation rose from 6% to 44%.

Conclusions

The intervention was effective but needs to be sustained in the face of staff changes. Regular re-audits would be helpful.

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MEDICAL, PSYCHIATRIC AND PSYCHOLOGICAL INTERVENTIONS IN A DIAGNOSTIC MEMORY CLINIC

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Background

A variety of models of memory assessment exist. Between 2005 and 2007 patients seen in the Newham Diagnostic Memory Clinic (DMC) received a joint assessment by geriatric medicine, psychiatry and neuropsychology. We wish to show the benefits of multidisciplinary assessment, with universal medical assessment.

Methods

We reviewed the multi-disciplinary clinic letters for patients seen in the clinic from 2005 to 2007. We noted their interventions (other than interventions directly for their dementia, e.g. prescription of acetylcholinesterase inhibitors). These were categorised as 1) 'Medical' or 2) 'Psychiatric and Psychological'.

Results

204 completed cases were reviewed. 168 patients (82%) underwent an intervention instigated by a geriatrician. These included medication to treat medical co-morbidities in 163 cases (80%), Geriatric Outpatient review to further investigate 'medical problems' (e.g. falls, weight loss) in 19 cases and referral to other specialities in 33 cases. 61 (30%) cases required psychiatric or psychological intervention. These included starting 'psychiatric' medication, e.g. antidepressants (23 cases), Psychiatry Outpatient follow up (28 cases) and referral to psychological services (30 cases).

Conclusions

The results show that patients with a memory problem are best served by a multi-disciplinary assessment that always includes medical assessment. 80% of patients were treated for associated medical conditions as a result of medical review. Significantly more patients needed a 'medical' than a 'psychiatric' intervention.

Since 2007, our assessment has been streamlined, but medical review remains compulsory.

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IMPROVING THE DOCUMENTATION OF THE ASSESSMENT OF MENTAL CAPACITY

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Problem

Documentation of the assessment of mental capacity may not comply with the Mental Capacity Act 2005 guidelines. This specifies the assessment of capacity through the assessment of four tests- to be able to understand, retain, use and weigh information and communicate a decision.

Design

Medical staff performing mental capacity assessments were required to submit details of cases to the auditors over a six month period. After intervention, the audit was repeated. Ten cases were required for each phase.

Setting

Newcastle Care of the Elderly Department wards

Improvement measures

The results of the first audit were presented with the launch of an assessment pro-forma.

Change Strategies

The pro-forma was made available on all geriatric wards.

Change effects

In the first audit, all four tests of mental capacity were clearly documented in 5 of 10 cases. The documentation was particularly deficient for cases judged to lack mental capacity for a decision. In the re-audit, all tests were documented in 8 of 8 cases where the pro forma was used, and incompletely documented in the two remaining cases. In both cycles, cognitive impairment was the most common reason for assessing capacity.

Conclusion

This audit demonstrates the documentation of mental capacity can be improved through the use of pro forma. We present our results to share the pro-forma for use by others within this increasingly important medico-legal area in everyday geriatric medical practice.

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DESIGNING AN EFFICIENT STROKE SERVICE MODEL – AN AUDIT FOLLOWING THE RE-DESIGN OF THE PATIENT PATHWAY FOR ACUTE STROKE CARE IN A DISTRICT GENERAL HOSPITAL.

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Problem

An efficient stroke service is required to deliver National Health Service Quality Improvement Scotland (NHS QIS) stroke care targets and to deliver stroke thrombolysis.

Design

Data was collected for 153 acute stroke patients over six months. A second round of audit (152 patients) was completed after the re-design of the in-patient pathway for acute stroke care.

Setting

Patients admitted to Wishaw General Hospital with the diagnosis of acute stroke between September and February 2007/08 and 2008/9 were included.

Improvement Measures

NHS QIS clinical standards for stroke care (2004): the percentage of patients admitted to a Stroke Unit within 24 hours; having CT brain scan within 48 hours; receiving aspirin within 48 hours and having a documented swallow screen within 24 hours.

Change strategies

An acute stroke service was established with education sessions to raise the awareness of the benefit of good quality acute stroke care.

Change effects

96% (146/152) of patients have a swallow screen performed within 24 hours (11% increase) and have a CT brain scan within 48 hours (3% increase). 69% (105/152) of patients are admitted to a stroke unit within 24 hours (8% increase) and 82% (107/152) receive aspirin within 48 hours (4% increase).

Conclusion

A re-design in the patient pathway has shown improvement across all four clinical standards for acute stroke care, implying a more efficient service with significant clinical benefit likely as a result.

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AUDIT OF MANAGEMENT OF RENAL FAILURE IN OLDER PEOPLE (>65YRS)

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Problem

Renal failure is common in older people. 50% of 70yr old or over have chronic kidney disease. Renal failure in older people is often reversible. NSF for kidney disease emphasises on early diagnosis and prevention of deterioration of kidney function. Despite this, management of most affected group (older people) remains suboptimal.

Design

Re-audit after implementation of strategies to improve practice. Renal algorithm developed in liaison with local nephrologist and staff made aware of it.

Settings

Prospective audit of inpatients over a period of three weeks, using structured proforma. 57 patients were included in the audit.

Improvement measures

Areas of poor performance in audit cycle one were highlighted amongst staff. Forward action plans included liaison with nephrologist, formation of an algorithm regarding management of renal failure patients.

Change strategies

Formation of renal failure management algorithm and increasing awareness amongst staff about it by presentations, one to one contact and feedback.

Change effects

Improvement in practice observed in following areas: investigations, referral to nephrologist/urologist, adjustment of nephrotoxic drugs, rehydration and treating infection.

Conclusions

Management of renal failure in older people can be improved by i) agreeing algorithm with local nephrologist by geriatricians ii) raising awareness of NSF for kidney disease iii) advertising the agreed algorithm. Compliance with staging of chronic kidney disease remains poor and needs to be improved.

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THE RAPID ACCESS BLACKOUTS TRIAGE CLINIC (RABTC) IS HIGHLY EFFECTIVE AT EVALUATING AND MANAGING ELDERLY PATIENTS WITH TRANSIENT LOSS OF CONSCIOUSNESS (T-LOC)

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Introduction

NHS data suggests increasing A&E attendance, among elderly, for "Collapse?cause". T-LOC one cause for Collapse?cause. CHD NSF, Chapter 8, advocated setting up of 'Blackout Clinics'.

Methods

Specialist-nurse lead RABTC, started May'07, in cooperation with A&E, Falls, General Medical, cardiology and neurology teams. All underwent structured computerised web-based questionnaire assessment and ECG. Triage into 'High /Low Risk'. Investigations/treatment as indicated. Supervision by cardiologist.

Results

N=327, 50 (15.3%) >75 years (82.9±5.1, range: 76-96, median 82). 38% Males. Most (88%) had ≥1 T-LOC. Majority (37/44, 84.1%): 'High Risk'. Diagnosis: Cardiac syncope: 29.5%, Reflex Syncope: 18.2%, OH: 11.4%, Syncope?cause: 31.8%, Uncertain cause: 15.9%. Treated: 47.7% (PPM: 90.5%, drug changes: 28.6%). Discharged: 15.9%. On FU (239±143.6 days), 77.3% asymptomatic. Re-hospitalisation post evaluation significantly decreased: 62 % pre vs 13.6%, post, p<0.001. Those >75 years (vs ≤75) had more: hospitalisations (62% vs 41.2%, p<0.01), 'High Risk' (84.1% vs 55.5%, p<0.001), structural heart disease (54.1% vs 27.4%, p<0.002), cardiac syncope (29.5% vs 8.4%, p<0.001) and mortality (6.8% vs 1.1%, p<0.012).

Conclusion

Specialist-nurse lead RABTC highly effective in structured, comprehensive, thorough assessment/management of elderly T-LOC patients. Immediate identification of 'High Risk'. Pacemaker requirements efficiently identified. Majority asymptomatic on FU.

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GERIATRIC MEDICAL ADMISSIONS UNIT (GMAU): IMPROVING PRACTICE AND LENGTH OF STAY

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Background

Medical Assessment Units were introduced across NSW in 2008 to improve patient flow particularly for older patients. A number of different models have emerged. In our hospital, eight existing beds in Geriatric Medicine became a 48 hour GMAU to provide comprehensive multidisciplinary assessment at admission to hospital.

Innovation

Additional staff were provided for the 8 beds. A senior nurse, physiotherapist, occupational therapist and social worker started in April 2008. Dedicated senior medical staff commenced in Feb 2009. Data is circulated monthly in relation to performance including length of stay, readmissions, number of departmental outliers.

Evaluation

Over the past 2 years there has been no change in admissions to geriatric medicine (r=-0.66, p=0.77). An average of 77 patients are admitted to the GMAU each month with the numbers increased since the additional of dedicated senior medical staff. There has been a significant reduction in LOS over time (r=-.627, p=0.001) with LOS decreasing from 13.7 days prior to introduction of the GMAU to 9.68 days over the 12 months post introduction. This has significantly reduce the number of Geriatric Medicine outliers across the hospital. There has been no increase in rate of readmissions. One third of patients are discharged directly from the MAU reducing the workload of the acute service.

Conclusions

Adequately resourced GMAU can provide early comprehensive geriatric assessment can improve overall performance and efficiency in Geriatric

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**ROUND 2 NATIONAL ORGANISATIONAL
AUDIT OF FALLS AND BONE HEALTH
SERVICES**

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Introduction

Previous national audits assessed organisation (2006) and clinical delivery (2007) of services for falls prevention and bone health identified significant deficiencies and inter-trust variation. Results were disseminated widely. Most NHS trusts responded with local action plans. Here we present the second round audit, including mental health and primary care organisations.

Methods

Web-based audit, standards derived from NSF for Older People (2001), NICE (CG21,2004: TAG87,2005), "Blue book" (2003), and NPSA 2007. Audit questions were refined through piloting. Weighted domain scores for adherence were devised to enable benchmarking between trusts.

Results

93% (315/337) of acute trusts, primary care organisations and health and social care trusts in England, Wales and Northern Ireland participated. Opportunities to prevent recurrent falls and fractures are being missed as risk assessments in A&E departments and Fracture services are inadequate. Most trusts have developed inpatient falls policies, but only 1/3 know their inpatient falls rates. Commissioning is patchy, rarely providing a coordinated falls and fracture strategy: important public health information on fracture rates is inadequate or not collated.

Many clinical services are not adhering to the NICE standards on details of secondary fracture and fall prevention, evidence based exercise programmes, or validated home mobility safety assessments.

Conclusions

Results are not directly comparable with those from Round 1 but overall show no substantial improvement and persisting marked variation between trusts.

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**OPERATIONALISING FRAILTY
DEFINITIONS IN THE EMERGENCY
DEPARTMENT – A MAPPING EXERCISE**

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Background

Emergency departments (EDs) assess a large number of older patients many of whom are subsequently admitted to acute medical units (AMUs). We assessed the frailty status of older patients attending an ED with a set of simple operational criteria.

Innovation

Medical student volunteers identified patients aged >70 attending one ED over a five day period. Frailty was defined as >1 of: fracture, care home residency, confusion (Abbreviated Mental Test-4 score <4), Waterlow score >25. Frailty status, demographics, geriatric syndromes and final destination were recorded.

Evaluation

Of 1723 admissions, 256 were aged >70. 177/256 older patients were assessed, mean age 82.5 (range 69-99). 52 (29%, 95% CI 23-37%) were classified as frail, with confusion being the most commonly met criterion (38/52, 73%). Frail older people comprised 3% (52/1723) of admissions. This definition of frailty correlated well with the number of geriatric syndromes (Pearson's coefficient 0.56, p<0.0001). 75% (21/28) of frail patients required admission compared to 24/37 (66%) non-frail patients. Overall, 16/33 (48%) patients admitted to AMU from ED were frail.

Conclusion

The pragmatic operational definition of frailty used in this mapping exercise identified a small but vulnerable population at risk of prolonged hospital admission and other adverse outcomes. Interventions to improve care for this group early in their hospital stay have the potential to greatly influence patient flow in the axis of acute medical care.

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DESIGN & IMPLEMENTATION OF NEW MEDICINE IN THE COMMUNITY MODULE: A UNIQUE PARTNERSHIP BETWEEN MEDICINE FOR THE ELDERLY & GENERAL PRACTICE AT UNIVERSITY COLLEGE DUBLIN (U.C.D.)

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Introduction

There is evolving emphasis on community-based teaching to promote 'better understanding of ...the doctor-patient relationship...and the changing healthcare environment' (Shipengrover and James, 1999). This is particularly important given Ireland's changing demographic and focus on community-based healthcare delivery.

Methods

A new core six-week Medicine in the Community module was introduced by U.C.D. in 2009. It is designed and delivered by health professionals in Medicine for the Elderly and General Practice. Learning objectives incorporate understanding the role of GP and Medicine for the Elderly physicians. Theoretical and clinical content is organised around themes including prevention/health promotion, acute/chronic illness, psychosocial issues, family, and continuing care.

The module is delivered in the penultimate or final year of the undergraduate MB degree programme. It is run four times annually, accommodating fifty students each time. The introductory week involves (1) core lectures, (2) workshops facilitating team-work, practical and communication skills, and (3) seminars. This is followed by fortnight rotations in (1) a rehabilitation and continuing-care facility and (2) general practice. Students attend day-hospitals, ward-rounds, multi-disciplinary sessions, tutorials, and engage in self-directed learning.

Assessments comprise (1) a clinical portfolio-encompassing activity logs, case presentations, group projects, (2) MCQ, and (3) OSCE. Two-way feedback is encouraged throughout and students formally evaluate the module at its end.

Conclusion

This module represents a novel, innovative partnership between Medicine for the Elderly and General Practice and an exciting development in medical education.

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HOW DOES AN EMERGENCY DEPARTMENT SCHEME DESIGNED TO REDUCE EMERGENCY HOSPITALISATION AFFECT UNPLANNED REATTENDANCE IN THE OLDEST PATIENTS?

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Introduction

Schemes to reduce hospitalisation despite rising Emergency Department (ED) attendances, reduced bed capacity and changes to GP out-of-hours cover, are increasingly prevalent. Markers of service quality such as unplanned re-attendance are rarely applied. We retrospectively evaluated re-attendance before and during a pilot Clinical Decision Unit (CDU).

Methods

The 2006 pilot CDU sought patients suitable for alternatives to acute hospitalisation. 854 patients were attended to (32% aged ≥70). Patients were discharged to GP or Outpatient services or admitted. We assessed reattendance within 30 days for those not admitted. This process was repeated for three age-stratified, randomised, comparable cohorts from the same clinical centre for years 2003, 2004 and 2005.

Results

Mean re-attendance for all ages was 3.1% (2003), 3.9% (2004) and 7.1% (2005). During CDU pilot (2006), this increased to 14.9% for all ages but rose from zero to 20.4% for >80 year olds. Analysis of ED admission or discharge patterns in >80 year old patients showed that < 15% were discharged from the ED prior to 2006, compared with 60-70% during the CDU pilot.

Conclusion

Unplanned re-attendance was disproportionately increased in the oldest age group during the pilot CDU. Since the majority of CDU patients seen were discharged home to GP or Outpatient services, is a higher re-attendance rate an acceptable and unavoidable trade-off? Triangulation with other markers of service quality is necessary in an area lacking evidence base.

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MOBILE COMPREHENSIVE GERIATRIC PROGRAMME (MCGAP)

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Background

NSF for older people 2001 recommended specialist multidisciplinary assessment of older people throughout hospital. There are many older people in wards outside specialist older people units.

Innovation

Introduction of geriatrician coordinated multidisciplinary comprehensive assessment of older people (MCGAP) in wards outside the Department of Medicine for Older People. Proposal presented to Trust management board and agreed. Agreement obtained from all consultants in general medical and surgical wards for their patients to have comprehensive assessment without referrals. Three months pilot study conducted.

Evaluation

Admission to MCGAP 17.39 days (average), MCGAP to discharge 13.02 days (average), MCGAP to transfer/discharge 2.61 days (average). 64% patients discharged to their own home. 82% patients had 0 to one functional scales recorded before MCGAP. 85% had five to six functional scales recorded after MCGAP. Survey showed 98% satisfaction with MCGAP staff involvement in proactive management.

Conclusion

Reduced length of stay with high patient and staff satisfaction.

Appropriate early transfer for rehabilitation.

Initial pilot led to approval of 6 months programme for MCGAP with a part-time consultant, OT & part-time nurse, which is due to be completed soon.

MCGAP type programme should become a feature of every general hospital for complying with the standard 4 of NSF for older people.

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CAN INFORMATION TECHNOLOGY (IT) SOLVE THE ISSUE OF FALLERS PRESENTING TO ACCIDENT AND EMERGENCY (A&E)?

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Background

Older people presenting to A&E with a fall should be offered a multifactorial risk assessment. The CFPP assesses patients at home after a fall, followed by onwards referral to existing services for individualised and multifactorial intervention. Referrals to CFPP are dependent on A&E staff identifying a need. Currently these fallers are not being referred.

Innovation

Nursing staff use the Hospital Information System (HIS) to document the patient journey. A question, 'Was this due to a fall?', was introduced on the nursing triage screen, for all patients over 65 being discharged from A&E. Nursing staff cannot progress through the patient assessment without answering. A 'yes' automatically results in an electronic referral to the CFPP.

Evaluation

In 2008 HIS was used to study fallers presenting to A&E. 709 >65year olds attended A&E in three months. Of these 55 were identified as a 'fall' (7.8%). Only 2 were referred onto the CFPP. Further interrogation of the HIS revealed 172 (24%) had an injury attributable to a fall which was not previously identified. Since the introduction of the 'falls question', 130 patients have presented with falls to A&E and have been referred to the CFPP over a 6 week period.

Conclusion

A simple and novel change in the way information is recorded for patients presenting to A&E with a fall has already resulted in a vast increase in appropriate referrals to the CFPP.

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CARDIOPULMONARY EXERCISE TESTING (CPET): FEASIBILITY AND EFFECTIVENESS IN OLDER PEOPLE UNDERGOING COLORECTAL SURGERY

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Background

CPET assesses cardiopulmonary capacity, providing a measure of anaerobic threshold(AT). Previous work suggests AT<11 is associated with increased postoperative mortality and is predictive of post-operative requirement for high dependency (HDU) or intensive-care unit(ITU). CPET is increasingly used as a predictor of postoperative outcome, despite paucity of evidence in older people.

Innovation

Between June 2006-October 2007 consecutive colorectal patients underwent routine pre-assessment or if >60years assessment by 'proactive care for older people undergoing surgery'(POPS). All were routinely referred for CPET. Data was collected prospectively throughout the surgical journey.

	<60yrs (n=50)	60-75yrs (n=32)	>75yrs (n=26)
Unable to complete CPET(n=17)	6 (12%)	3 (9.4%)	8 (30.7%)
AT>11 Average risk(n=70)	38 (76%)	20 (62.5%)	12 (46.2%)
AT<11 High risk(n=21)	6 (12%)	9 (28.1%)	6 (23.1%)

	Unable to complete CPET(n=17)	AT>11 (n=70)	AT<11 (n=21)
Postoperative placement:			
Ward	9(53%)	50(71%)	10(48%)
OIR	5(29%)	10(14%)	7(33%)
HDU/ITU	3(18%)	10(14%)	4(19%)
Postoperative complications	7(42%)	28(40%)	12(57%)
LOS>10/days	10(59%)	36(52%)	11(52%)
Readmissions	3(18%)	6(9%)	5(24%)

Evaluation

There was little relationship between CPET status and post-operative stepdown care. High-risk CPET patients had non-significant trend towards more postoperative complications (p=0.29) but a similar length of stay (p=0.88).

Conclusions

The high non-completion rate of CPET and the lack of influence on postoperative placement suggests subjecting older people to a widely used test does not add value to perioperative management. We are withdrawing CPET from routine practice, and undertaking a RCT to compare its feasibility and effectiveness with an alternative preoperative assessment tool using ASA and CGA.

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APPROPRIATE PRESCRIBING IN OLDER PEOPLE

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Introduction

Adverse drug events (ADEs) are common in older people, and are often related to polypharmacy. We carried out an audit of prescribing in hospitalised older people using Screening Tool of Older Persons' Prescriptions (STOPP) and Screening Tool to Alert doctors to Right Treatment (START) criteria.

Methods

This was a prospective case note review of patients ≥70 years conducted on eight wards at one District General Hospital (DGH). Demographics, diagnoses, co-morbidities, geriatric syndromes and current prescriptions were collected from hospital notes and drug charts. Appropriateness of prescriptions was determined using the STOPP/START criteria.

Results

190 patients' notes were assessed. The mean age was 82, range 65-99 years, 62% were female. The mean number of co morbidities was 4.9, and the mean number of geriatric syndromes was 1.1.

Using the START criteria, 47% (90/190) possible omissions were identified, 70% related to cardiovascular medicines.

Using the STOPP criteria, 40% (73/183) potentially inappropriate prescriptions were identified, 25% being cardiovascular medicines such as loop diuretics for hypertension.

Conclusion

Prescription errors are common in hospitalised older people. The STOPP/START tool is easy to use and may help identify drugs which should be stopped or started in order to improve outcomes for frail older people.

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PAYMENT BY RESULTS: FRIEND OR FOE?

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Background and aims

Payment by Results (PbR) is the financial model to ensure NHS Trusts are paid according to services provided to individual patients. Most patient attendances and admissions in a secondary care setting are translated into a tariff, charged to commissioners. PbR poses challenges to Elderly Care departments, whose patients have multiple comorbidities and complex in/out-patient journeys. All this information must be captured accurately to ensure appropriate remuneration for each patient episode.

Sampling Methods

PbR tariffs were calculated for 64 consecutive patients' discharges from two elderly care wards using electronic discharge summaries alone and then using any additional information from clinical notes. Any discrepancies in co-morbidities, investigations, diagnoses and management were also recorded.

Results

No changes in PbR tariffs were noted in 64% cases. Using the discharge summary data alone in the remaining 36% of cases demonstrated an undercharging of £23,788, when additional information obtained from the medical notes was included to calculate tariffs. Seven casenotes (11%) added co-morbidities to coding but did not alter tariff.

Generalisable conclusions and further work

This sample represents 3% of annual in-patient attendances within this elderly care department. Extrapolating the data suggests a 'potential loss of income' of £780,000 yearly. Though this 'undercharging' may not be generalisable to other departments, accurate record keeping could ensure appropriate remuneration for clinical work, service developments and better communication.

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GUIDELINES RECOMMENDING INTRAVENOUS VITAMIN K ON ADMISSION REDUCE TIME TO SURGERY IN HIP FRACTURE PATIENTS TAKING WARFARIN

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Problem

Warfarin is a commonly used anticoagulant. Early fixation of hip fractures is associated with improved morbidity and mortality. 'Blue Book' guidelines recommend delaying fixation until the INR is less than 1.5. Initial audit identified a 'watch and wait' strategy as being responsible for delayed surgery.

Design

Retrospective case note audit of 117 hip fracture patients (November 2007 – February 2008) followed by re-audit of 121 patients (March 2008 – June 2008).7 anticoagulated patients identified in first cycle, 10 anticoagulated patients identified in second cycle. No significant difference in patient age or admission INR across cycles.

Setting

Acute orthopaedic trauma unit

Improvement measures

Time to surgery and thrombotic complications.

Change Strategies

Trust clinical guidelines on management of the warfarinised patient requiring urgent surgery introduced in February 2008 (2mg intravenous vitamin K on admission and bridging anticoagulation protocols)

Change effects

	Initial Audit	Second Cycle (Guidelines applied)
Minimum time to surgery (hours)	70	26
Maximum time to surgery (hours)	125	36
Mean time to surgery(hours)	90.5	31.2(p=0.01)

All delays in surgery seen in the initial audit were attributable to anticoagulation. No thrombotic complications occurred in patients given vitamin K on admission.

Conclusions

Introduction of guidelines significantly reduced time from admission to surgery. This reduction was not accompanied by an increase in thrombotic complications. Reversal of therapeutic anticoagulation with a single 2mg dose of Vitamin K allowed surgery within 48hrs.

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PARKINSON'S DISEASE AWARENESS SURVEY

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Background and Aims

It is important that healthcare workers understand why Parkinson's disease (PD) patients receive medications on time, and potential pitfalls in management.

This survey assesses the knowledge of junior doctors and nursing staff about the day-to-day management of PD.

Sampling

The web-based survey was sent to 1459 junior doctors and nursing staff in 17 NHS Trusts in England and Scotland. There were 267 responses from 16 Trusts.

Results

95% of respondents could select madopar as a PD drug; only 46% could identify ropinirole.

Around 1/3 of respondents selected inappropriate drugs for management of common concurrent conditions.

95% felt that stopping dopaminergic therapy was unacceptable if a patient was NBM; >50% selected inappropriate alternatives.

There was some understanding of why medications are given at specific times, but important complications such as neuroleptic malignant-like syndrome were identified by <50%.

Generalisable conclusions

Whilst the 'Get it on time' message seems to be adhered to, doctors and nurses are unable to recognise common PD drugs and do not fully understand complications of withholding dopaminergic therapy. They are also unaware of contraindicated medications.

Further work

The survey did not address undergraduate training. This would be a useful correlate in terms of knowledge. Elderly Care and Neurology Departments could both undertake teaching and institute case-finding on wards, with clear pathways for early referral to a specialist to support junior doctors and nurses.

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WHY ARE PATIENTS ADMITTED TO HOSPITAL FROM HOME BASED INTERMEDIATE CARE?

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Background and aims

The Community Resource Team for Older People (CROP) provides a multidisciplinary approach to managing older people at home, 9am - 5pm seven days a week. Following anecdotal reports of unnecessary hospitalisation by "out of hours" services, our aim was to identify patients admitted to hospital and ascertain possible areas to target future interventions.

Sampling methods

Using the CROP database, information on all patients active to CROP during a 3 month period beginning 1st December 2007 was collected. For those admitted to hospital the following was obtained by medical notes review: date and time of admission; who admitted; length of stay; and outcome.

Results

48 (22%) of 221 patients were admitted to hospital with 51 admissions in total. Notes review for 45 patients showed 57% of admissions were between 9am and 5pm, 55% self referred to A&E, 19% were admitted via their General Practitioner, 26% from other health care professionals.

The average length of stay was 23 days (range 1-139, median 13). Mortality rate was 38%.

Generalisable conclusion and further work

22% of patients were admitted to hospital; unexpectedly the majority during CROP working hours and predominantly self referrals to A & E. We are looking at ways of identifying these patients and if alternatives to admission can be considered. However, the length of stay and high mortality rate suggest some admissions may have been unavoidable.

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PRE-OPERATIVE GERIATRIC ASSESSMENT: WHAT IS THE EVIDENCE?

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Introduction

Pre-Operative Geriatric Assessment has been proposed to be an effective tool to reduce risks for older patients undergoing surgery.

Optimisation pre-operatively may have an impact on improving intra-operative and post-operative outcomes.

The aim of this review is to identify and evaluate the evidence basis in the literature for this model of care.

Methods

Ovid databases on NHS Elibrary searched: Medline,Cinahl,Embase,Cochrane

Search terms used: geriatric assessment; pre-operative assessment.

Results

From 22 relevant articles, 5 original study articles found.

Two distinct models of Pre-Operative Geriatric Assessment described in literature.

Firstly Geriatrician led Multi-Disciplinary Team(MDT) approach and secondly clinicians of various specialities using geriatric assessment tools to evaluate patients pre-operatively.

Harari et al Age and Aging 2007;36:190-6 showed that a geriatrician led MDT approach can reduce post-operative complications (pneumonia $p < 0.008$, pressure sores $p < 0.004$) and length of stay($p < 0.0001$) significantly. Average length of stay reduced by 4 days.

Marcantonio et al., J Amer Geriat Soc 2006;54 found that pre-operative review of patients with fractured neck of femur reduced incidence of delirium ($p < 0.04$).

The papers using geriatric assessment tools identified frail patients at risk of complications but delivered no interventions to improve outcomes.

Conclusions

Pre-operative geriatric assessment has been shown in one study to significantly improve outcomes on surgical wards through application of comprehensive geriatric assessment, multi-disciplinary working and patient targetted interventions. New area of geriatric medicine with growing evidence basis and widespread potential applicability.

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USEFULNESS AND FEASIBILITY OF USING THE CONFUSION ASSESSMENT METHOD (CAM) TO DETECT DELIRIUM IN HOSPITALISED ELDERLY MEDICAL PATIENTS

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Introduction

Delirium is common in hospitalised elderly patients. National guidelines recommend using the Confusion Assessment Method (CAM) in elderly patients with cognitive impairment. We evaluated the utility and feasibility of this in the acute setting.

Methods

As a development of the OPAL service, patients aged 70 years or more admitted under acute medicine were assessed for delirium using CAM, while carrying out the MMSE. Collateral history was obtained when required. Clinical notes were checked for prior cognitive assessment. CAMs were performed by trained Elderly Medicine SPRs.

Results

212 patients were assessed, mean age 82 years (range 70 - 101), 58% female. Only 37 patients (17%) had prior documentation of cognitive function (MMSE 0, AMT 32, other 5). 114 patients (54%) had cognitive impairment (MMSE under 25), of whom 31 (27%) had known dementia. 36 patients (17%) had delirium (17 predominantly hypoactive) of whom only 4 had been recognised by the acute medical team. 23 (64%) patients with delirium had no documentation of cognitive function. CAM assessments excluding collateral history took a maximum of 10 minutes and were possible in 212 / 247 (86%) of patients. 78 patients required collateral history.

Conclusions

Dementia and delirium are both common conditions in elderly inpatients which are often missed. The CAM is a simple screening tool for delirium and can be used with benefit in most elderly patients in the acute setting after appropriate training.

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PLUM OR PRUNE? A PROSPECTIVE STUDY OF WATER PROVISION IN A DISTRICT GENERAL HOSPITAL

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Introduction

Water is essential for physiological processes and must be available to patients at all times (National Patient Safety Agency). Dehydration causes adverse effects, increasing length of stay. The elderly are less likely to drink having decreased thirst mechanism, sensory deprivation and immobility. (Kleiner SM. Journal of the American Dietetic Society). A survey was undertaken assessing whether patients' drinks were available and within reach.

Method

Six wards were reviewed. Patient's age, drink availability and whether they could reach their drink were recorded. Patients were assessed for dehydration.

Results

144 patients were assessed with a mean age of 74. 37% did not have a drink available and 32% could not reach their beaker. Of these, the average age was 83 and three quarters were clinically dehydrated. Only 30% had a fluid balance chart, of which half were filled in. Staff were educated and posters designed and placed at bedsides hi-lighting the importance of water provision. On re-survey, 95% had water available with 96% able to reach their drink. Only 17% were dehydrated.

Conclusion

Water provision in hospital is poor, causing dehydration. The elderly are at higher risk and more likely to suffer the consequences. A simple educational intervention has raised awareness that hydration is a collective responsibility with impressive outcomes. This needs to be implemented throughout the NHS.

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AUDIT ON COMPLIANCE WITH TREATMENT ADVISED BY FRACTURE LIAISON SERVICE

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Introduction

We follow the Glasgow model of Fracture Liaison Service for secondary prevention of osteoporotic fractures. All patients of over 50 years, attending our fracture clinics are sent a risk-assessment questionnaire and selected patients are assessed by DEXA measurement, before being seen in the clinic. The primary care physician is advised accordingly. There are no follow-up arrangements.

Aim of the audit was to assess the compliance with the treatment, at least one year after clinic attendance.

Method

Questionnaires were sent in June-July 2008 to 342 patients who had attended clinic from 1st November 2005 to 30th October 2006. 208(61%) patients responded.

Results

Average time from clinic attendance was 24 months (range 20-32 months).

144(69.2%) of the patients were on the same treatment as initially prescribed, including 121(58%) on oral Bisphosphonates and a further 11(5.3%) were on alternative treatment.

Of the 53(25.5%) non-compliant patients, only 4 had stopped taking medications on doctor's advice. The non-compliant patients included 24 patients prescribed oral Bisphosphonates and 5, who were prescribed Strontium.

129(62%) patients confirmed that they received satisfactory information about osteoporosis, at the clinic.

Conclusions

Significant number of patients (74.5%), were still on treatment for osteoporosis after an average of two years from attending the FLS clinic, indicating the success of the programme. The information being given to the patients at the clinic can be improved which may enhance compliance further.

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IS EXERCISE A TREATMENT FOR DEPRESSIVE DISORDERS IN THE ELDERLY?

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Scope

Depression is the commonest mental health problem of later life, affecting 15% of older people and projected to be the leading cause of morbidity by 2020. Effective treatments exist but are limited by side effects. Depression remains inadequately treated in 30%.

The literature was reviewed to determine whether exercise effectively treats depression in the elderly.

Search Methods

Medline, CINAHL, Pubmed, NHS economic evaluation database, Database of abstracts of reviews of effects, The Cochrane Library and Google between January 1995 and March 2009 were searched with the search terms exercise, exercise therapy, depression, depressive disorders, aged and elderly.

Appraisal

Abstracts relevant to the elderly were identified. Only randomised controlled trials where patients had depression diagnosed according to the DSM IV criteria and the primary outcome was measured using depression scales were included.

Results

12 trials met the inclusion criteria.

2 trials suggested exercise could be as effective as sertraline (p<0.001).

Aerobic, resistance and tai chi exercises all significantly improved depressive symptoms but the evidence did not favour one particular type.

2 trials suggested benefits long term.

Trials were small, short and methodologically flawed.

Conclusions

Exercise may be an effective therapy for depression. It can be readily provided in various settings and in view of the side-effects of antidepressants would be an attractive alternative. However better quality research is required to determine optimum frequency, length and type of exercise.

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THE IMPACT OF DISCHARGE FACILITATORS ON LENGTH OF STAY ON A MEDICINE FOR THE ELDERLY WARD

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Background

Extended lengths of stay on medicine for the elderly wards can lead to adverse outcomes for patients as well as problems with bed management and associated costs.

Innovation

A discharge facilitator role was developed whereby a trained nurse is allocated to co-ordinating the discharge of medically stable patients without having to meet other clinical commitments during the working week.

Evaluation

The case notes of patients who stayed in hospital >10 days in one admission before (28 notes) and after (30 notes) the introduction of a discharge facilitator were reviewed. Data was collected which included total LOS and how many days patients stayed beyond being deemed medically fit.

After the introduction of a discharge facilitator the mean length of stay was reduced from 31(range 13-77) to 19 days (range10-73). The LOS was reduced when comparing patients with the same number of diagnoses. The commonest cause for an extended LOS was social issues (before 64% and after 74%).

Conclusions

The development of the discharge facilitator role appears to impact on the length of stay for older patients who have an extended length of stay after they are deemed medically fit for discharge. The use of trained experienced nursing staff in this role appears to be effective and may be a model that other acute wards may consider with the increasing age of patients in the hospital setting.

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ADVANCE DECISIONS TO REFUSE TREATMENT - A SURVEY OF HEALTHCARE PROFESSIONALS

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Background and aims

As healthcare professionals, experience in dealing with patients with advance decisions is limited. Terminology can be difficult to interpret. We looked at how doctors and professions allied to medicine (PAMs) interpreted advance decisions with terms such as “unlikely recovery” and “rational existence”, based on our experience of a patient with an advance directive admitted with a severe stroke.

Sampling methods

A multi-choice questionnaire was issued to 65 people (doctors and PAMs), asking for their interpretation of this advance decision, and their opinion on management options.

Results

45 questionnaires (69.23%) were returned. Respondents were split between “less than 25%” recovery (45%) and “less than 75%” recovery (41%) as the minimum standard for an “unlikely recovery”. 47% deemed “living in a residential home” as the minimum for a “rational existence”, with opinion ranging from “independent” to “requiring full nursing care”. Doctors were more likely to thrombolysed the stroke, give antiplatelet agents, pass a nasogastric tube and give intravenous or subcutaneous fluids while PAMs were more likely to consider giving antibiotics for infections.

60% of respondents had no previous contact with advance decisions and only 38% were aware of existing guidance regarding them.

Generalisable conclusions and further work

Healthcare professionals need more education on advance decisions to refuse treatment as these documents become more prevalent in the future. Guidance should be given to patients so that decisions are clearly interpretable.

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ARTIFICIAL FEEDING AND HYDRATION (AFH) IN PATIENTS WITH ADVANCED DEMENTIA

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Scope

Literature search to review the evidence for and against AFH in patients with advanced dementia.

Search method

Primary search of Google using the terms advanced dementia, AFH, tube feeding, with key modifying terms, patient information, ethical, legal. For clinical information I used only peer reviewed Journals. For guidelines and professional advice I searched the web sites of the BMA, BGS, RCPL, GMC and Alzheimer’s Disease Society.

Appraisal

Most of the evidence available is based on observational retrospective or prospective studies. Blinding is impossible and recruitment is hampered by a multitude of ethical and legal issues.

Many of the professional bodies in UK issued useful guidance about feeding and hydration in terminally ill patients including patients with advanced dementia.

Results

AFH in patients with advanced dementia increase the risk of aspiration pneumonia and decubitus ulcers. It does not prolong survival or improves well being or function. AFH is not necessary or effective in providing comfort and palliation.

Conclusion

The majority of patients with advanced dementia can be fed and hydrated orally using an approach based on hand feeding. Hand feeding maintains social interaction and reduce many of the problems associated with tube feeding such as aspiration pneumonia and use of restraint but it is time consuming and labour intensive.

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IS BOTULINUM TOXIN AN EFFECTIVE TREATMENT FOR LIMB ESSENTIAL TREMOR - A SYSTEMATIC REVIEW

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Scope

Essential tremor (ET) is one of the most common movement disorders. Effective treatment options are limited and conventional medications often have side effects. Intramuscular Botulinum Toxin A (BTXA) is established as an effective treatment for diseases of muscle hyperactivity including post-stroke spasticity and dystonic tremor. However its use in ET is controversial.

Search Methods

The Cochrane Library, CINAHL, OVID, EMBASE & MEDLINE databases were searched using the terms 'tremor', 'botulinum toxin' and 'botox'. Google was searched using the phrase 'botulinum toxin and essential tremor'.

Appraisal

The search revealed 7 relevant articles. 5 were open label trials with only 2 randomised controlled trials.

Results

Intramuscular BTXA toxin injections were well tolerated with an average total dose of 100iU used. The main side effect was muscle weakness, although this rarely resulted in functional limitation. In all but one study, BTXA resulted in a significant reduction in tremor rating scores, reflecting clinical improvement. Improvement lasted 3-4 months. BTXA also resulted in a significant decrease in tremor amplitude but had an equivocal effect on tremor frequency. Measures of function and quality of life showed only a trend toward improvement.

Conclusion

Despite lack of large clinical trials there is some evidence that BTXA is an effective treatment for limb ET. Tremor rating scores appeared to improve but effect on functional ability remains less clear. None of the studies looked at cost effectiveness.

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IMPROVING REPRESENTATION OF OLDER PEOPLE IN CLINICAL TRIALS: A SYSTEMATIC REVIEW

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Scope

Older people are under-represented in clinical trials targeting many clinical conditions. Barriers to participation are recognised and appropriate interventions may improve representation and external validity of trials. In the PREDICT project we systematically reviewed methods to improve recruitment of older people to clinical trials (European Union, FP7 HEALTH-F4-2008-201917)

Search Methods

A search strategy to identify studies of older people and their representation in randomised controlled trials (RCT) was applied in MEDLINE, EMBASE, CINAHL, PsycINFO and Cochrane Database. We did not restrict by date or language.

Appraisal

Searches found 358 articles. Four RCTs targeted recruitment, consent, patient adherence, and professional compliance. Settings were community-based cardiovascular disease prevention, outpatient schizophrenia clinic, drug trial in Alzheimer's disease, and cancer health professionals. Studies recruited 46-400 participants.

Results

Enrolment through general practice was more effective than community and electoral roll methods in recruiting older people to a preventive trial. Education and counselling were effective in improving understanding of consent in older patients with schizophrenia. Substituting clinic with home-based assessment reduced withdrawal from a trial in Alzheimer's disease. An educational intervention in a cancer group did not improve trial recruitment.

Conclusions

Few interventions to improve participation of older people in RCTs have been evaluated. No RCTs evaluated simple interventions addressing barriers such as transport, timing or care of dependents. However methods targeting recruitment, consent and patient adherence may have value when designing future trials.

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DO CHANGES IN SERUM MAGNESIUM LEVELS CORRELATE WITH CHANGES IN MUSCLE STRENGTH IN OLDER PEOPLE? A PILOT PROSPECTIVE COHORT STUDY

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Introduction

Cross-sectional studies have suggested a relationship between serum magnesium levels and muscle strength. It is not however clear whether falls in serum magnesium are correlated with reductions in skeletal muscle strength when measured longitudinally.

Methods

New admissions to Medicine for the Elderly assessment wards were included in a prospective cohort study. Anthropometric data (Triceps skin fold thickness and mid arm circumference) were recorded at baseline. Serum magnesium was measured on admission, and at days 1,2,3,5,7,10,14,21 and 28 days after admission. Handgrip and quadriceps strength were measured at each timepoint in the non-dominant limbs using portable dynamometers.

Results

43 participants were recruited. Mean age was 83.8 (SD 7.5) years and 25/43 (58%) were female. Mean serum magnesium at baseline was 0.89 (SD 0.17) mmol/L. 3/43 participants had a fall in magnesium to below 0.7 mmol/L and 2/43 participants had a fall in serum magnesium of at least 0.2 mmol/L. Baseline serum magnesium levels did not correlate significantly with handgrip strength ($r=0.15$, $p=0.36$) or with leg strength ($r=0.32$, $p=0.06$), and change in serum magnesium did not correlate with change in handgrip strength ($r=-0.03$, $p=0.76$) or with leg strength ($r=-0.01$, $p=0.94$).

Conclusion

Large falls in serum magnesium are uncommon in older hospitalised patients, and changes in serum magnesium do not correlate with changes in muscle strength.

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UNDERSTANDING OF OSTEOPOROSIS: A CROSS-SECTIONAL SURVEY OF PATIENT AND CARER KNOWLEDGE

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Background

Establishing current levels of osteoporosis awareness in an Irish population, not previously studied, will help inform future public and patient education regarding this preventable and often treatable condition.

Methods

A cross-sectional survey of 126 Day Hospital patients (where AMTS <6, carer interviewed) examined awareness of pathophysiology, risk factors, and own diagnostic status.

Results

103 patients, 23 carers participated; 78.6% female. Patients' mean age was 81.6 years (SD 6.2), carers' 55.6 (SD 13.6). 87.3% had heard of osteoporosis, 56.1% knew affected bone. 30.2% knew involved architectural change. 65.9% reported a doctor had never discussed osteoporosis. 92.9% correctly identified if diagnosed with osteoporosis, >96% their treatment status (42.9% calcium/vitamin-D, 26.2% bisphosphonate, 3.2% strontium). Regarding risk factors, 88.9% recognised ageing, 83.8% female-gender, 65.1% smoking, 62.4% thin habitus, 51.6% alcohol-excess, <10% other, e.g. hyperthyroidism /steroids. Awareness of complications ranged from 91.3% for fractures to 44.4% for height-loss. >85% knew calcium/vitamin-D and exercise are protective.

More women had heard of osteoporosis (91% V 74%, $p0.02$), knew affected bone ($p0.005$), appreciated gender a risk factor ($p0.015$) and that pain ($p0.05$)/ kyphosis ($p0.014$) are complications. Patients with confirmed osteoporosis were more likely to know affected bone (48.%7 V 80%, $p0.006$). Neither cognition nor age predicted understanding, nor were carers more likely to understand osteoporosis than patients.

Conclusion

There is scope for improving patient osteoporosis education, which may in turn improve compliance with preventive and therapeutic measures.

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THREE-MONTH PERSISTENCE AND COMPLIANCE TO WEEKLY ALENDRONATE THERAPY IN HIP FRACTURE

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Introduction

Following hip fracture, pharmacologic treatment can reduce rate of subsequent fractures. If factors associated with post hip fracture short-term poor adherence are identified, they can be targeted for modification sooner than later. The objective of the study was to assess three-month persistence and compliance to weekly alendronate in hip fracture patients, and to examine the reasons of poor adherence.

Methods

635 fragility hip fracture patients on weekly alendronate were approached in two University Hospitals from June 2008 to May 2009. Those with cognitive impairment and pathological fracture were excluded. 125 agreed to participate. Seventy completed three month post discharge telephone follow-up of self reported persistence and compliance. Descriptive statistics were used to summarise the results.

Results

Mean age was 82 years (range 69 - 95) and 96% were female. Seven percent stopped treatment and persistence rate was 93%. 11 (17%) were not fully compliant. In terms of reasons for non-persistence three (5.7%) were due to gastrointestinal (GI) side effect. In non-compliance group, 7 (10%) reported they forgot taking them and three (4.2%) due to GI side effects. There was no statistically significant difference in treatment adherence in two hospitals [$\chi^2 (1) = 0.061$; $p > 0.05$].

Conclusions

The adherence to treatment was suboptimal. Poor adherence was associated with patients' forgetfulness and side effect. They could be modified by regular follow up and reinforcement of the importance of continuing therapy.

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FACTORS ASSOCIATED WITH POOR COMPLIANCE TO WEEKLY ALENDRONATE THERAPY IN HIP FRACTURE: THREE MONTH FOLLOW-UP

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Introduction

Following hip fracture, osteoporosis pharmacotherapy can reduce rate of subsequent fractures. Poor compliance (consistency and accuracy with prescribed regimen) can compromise its effectiveness. The objective of the study was to assess weekly alendronate compliance rate at three months post fracture and examine patient's characteristics in compliant and non compliant groups.

Methods

Six-hundred-thirty-five fragility hip fracture patients on weekly alendronate were approached in two University Hospitals from June 2008 to May 2009. Those with cognitive impairment and pathological fracture were excluded. One-hundred-twenty-five agreed to participate. Seventy completed two stages of the study: postal questionnaires enquiring patient's characteristics and three month post fracture telephone follow up of self reported compliance. Chi -square statistics were used to determine the association between categorical variables.

Results

Mean age was 82 years and 96% were female. 83% were fully compliant. Patient's marital status, presence of pain, falls, appointments with medical professionals, number of medications, perception of own health and faith in treatment were not associated with patient's poor compliance [χ^2 is used, $p > 0.05$]. Patients who lived alone and those who did not recognise their osteoporosis treatment were associated with non compliance [$\chi^2 (1) = 0.015$; $p < 0.05$], [$\chi^2 (1) = 0.001$; $p < 0.05$].

Conclusions

Treatment compliance was suboptimal. Poor compliance was associated with lack of patient's knowledge on treatment and living alone. Regular reinforcement of the importance of continuing therapy and patient's education should be promoted.

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THE VALUE OF LATERAL VERTEBRAL ASSESSMENT IN PATIENTS RECEIVING GLUCOCORTICOIDS REFERRED FOR DUAL X-RAY ABSORPTIOMETRY (DXA)

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Introduction

Glucocorticoids are widely used to treat a number of medical disorders. Prolonged steroid use can cause osteoporosis and can lead to a significant increase in fracture risk of the hip and spine. Lateral vertebral assessment (LVA) can highlight patients who have vertebral fractures.

Methods

A retrospective audit of patients referred for DXA who have been taking oral glucocorticoids for >3 months reviewing osteoporosis treatment. DXA was performed and included total hip, femoral neck, lumbar spine and LVA.

Results

We reviewed 657 patients on glucocorticoids >3 months. Vertebral fractures were present in 19.3%. Mean age 59.8(+/-18) yrs. 72.3% patients being female. Common reasons for being on glucocorticoids included rheumatoid arthritis (47.1%), COPD (25.1%), gastrointestinal disorder (14.7%), bone marrow and renal transplants (7.5%) and inflammatory disorders (5.6%). 44.7% of patients had osteoporosis with the spine being the most likely site to be affected (35.5%). 31.2% of these patients were on treatment on referral. Patients who had vertebral were older and had more severe osteoporosis ($p < 0.001$).

Conclusion

A substantial number of patients on glucocorticoids are not on osteoporosis treatment with almost half of patients having evidence of osteoporosis. Vertebral fractures were present in almost 1/5 patients. Less than 1/3 of patients were on osteoporosis prophylaxis at time of referral. As substantial bone loss occurs in the first 6 months of glucocorticoid treatment, these high-risk patients should be prioritised for osteoporosis treatment.

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THE RELATIONSHIP BETWEEN BAROREFLEX SENSITIVITY AND THE HAEMODYNAMIC RESPONSES TO CAROTID SINUS MASSAGE

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Introduction

The pathophysiological process underlying carotid sinus hypersensitivity (CSH), a condition commonly associated with recurrent syncope and falls in older people, remains poorly understood. We evaluated the electronic haemodynamic data of patients investigated at a tertiary centre to determine the relationship between baroreflex sensitivity (BRS) and the heart rate (HR) and systolic blood pressure (SBP) responses to carotid sinus massage (CSM).

Methods

Carotid sinus massage was performed bilaterally in the supine followed by erect positions during continuous ECG and non-invasive blood pressure monitoring. Baroreflex sensitivity was calculated using the sequence method during 10-minutes' supine rest.

Results

302 consecutive patients, mean age 71 ± 11 years, were included. 74 (25%) had CSH defined as asystole ≥ 3 sec and/or SBP drop ≥ 50 mmHg. The maximal SBP response occurred 5.7 ± 0.1 sec (mean \pm standard error) after the minimal HR response to CSM, and correlated negatively with minimal HR (Pearson's $r = -.553$; $p < .001$). Minimal HR was significantly negatively correlated with log(up slope) ($r = -.281$; $p < .001$), log(down slope) ($r = -.290$; $p < .001$) and log(total) ($r = -.284$; $p < .001$) BRS. When adjusted for the effects of minimal HR, maximal SBP drop was negatively correlated with log(up slope) (partial correlation = $-.279$; $p < .001$), log(down slope) (partial correlation = $-.260$; $p < .001$) and log(total) (partial correlation = $-.303$; $p < .001$) BRS.

Conclusion

The heart rate or cardioinhibitory response to CSM was associated with enhanced BRS. However, the SBP or vasodepressor response was conversely associated with reduced BRS. This raises the intriguing possibility, confirming previous suspicions, that the cardioinhibitory and vasodepressor components of CSH represent separate pathological entities.

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HEMODYNAMIC PREDICTORS OF EARLY ORTHOSTATIC INTOLERANCE IN OLDER PEOPLE

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Introduction

The objective of this study was to explore the association of early symptoms of orthostatic intolerance (OI) with systolic (SBP), diastolic (DBP) and mean arterial (MAP) blood pressure changes in a sample of community-dwelling older people undergoing an active stand test.

Methods

224 community-dwelling older subjects (mean age 72.6 years, 68.8% females). All had a Mini-Mental State Examination score ≥ 23 and no risk factors for autonomic neuropathy. Subjects were monitored with the Finometer™ Pro device. Variables reflecting blood pressure changes (absolute low: nadir, magnitude of drop: delta, and speed of recovery) were extracted for SBP, DBP and MAP with the BeatScope™ software (5-second averages method), and correlated with self-reported OI during active stand.

Results

Of the 224 subjects, 62 (27.7%) reported OI. SBP changes had strong bivariate associations with OI, but not DBP changes. A logistic regression model suggested that the rate of recovery of SBP during the first 30 seconds following active stand is more important as a determinant of OI than SBP nadir or delta. Subjects who recovered at least 80% of their baseline SBP within 30 seconds post-stand were very unlikely to report OI.

Discussion

Orthostatic SBP changes were more important than DBP changes as determinants of early OI during active stand. The crucial importance of the quick SBP recovery in order to avoid OI is biologically plausible and fits the pathophysiology of Initial OH.

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AGE-RELATED DIFFERENCES IN THE CLINICAL PRESENTATION OF VASOVAGAL SYNCOPE

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Introduction

Vasovagal syncope (VVS) was previously assumed to be rare in older individuals but is now diagnosed with increasing frequency since the head-up tilt-table test (HUTT) was described. We performed a retrospective observational study to determine the age distribution and differences in clinical characteristics associated with age in patients diagnosed with VVS at a tertiary referral centre.

Methods

1083 consecutive patients with tilt-positive VVS were identified from a prospective database containing the demographics and clinical information of all referrals to our specialist unit over a 10-year period. VVS was diagnosed appropriate haemodynamic changes during HUTT and accompanying symptom reproduction.

Results

There was a bimodal age distribution with a smaller peak at 20-29 years and a larger peak at 70-79 years. Patients aged ≥ 60 years were more likely to present with unexplained falls (odds ratio [95% confidence interval] = 2.33 [1.36, 4.32]) and less likely to report loss of consciousness (0.50 [0.38, 0.64]) than patients aged < 60 years. Older patients were also less likely to report typical precipitants of prolonged standing (0.55 [0.40, 0.72]), posture change (0.61 [0.46, 0.82]) and hot environment (0.57 [0.42, 0.78]).

Conclusion

VVS is more common in older patients than was previously thought. The clinical presentation of VVS in older patients differs significantly from younger patients in that they are less likely to give a typical history and clinicians need to have a higher index of suspicion when presented with the elderly patient with unexplained falls or collapse.

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LONG TERM SURVIVAL IN OLDER PERSONS WITH CONGESTIVE HEART FAILURE

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Introduction

Prognosis from chronic heart failure (CHF) is variable. Betablockers, ACE inhibitors and diuretics all improve prognosis and are now widely prescribed. Our aim was to determine five year survival in newly diagnosed patients with CHF due to left ventricular (LV) dysfunction.

Methods

Consecutive medical patients aged over 70 admitted to Sunderland Royal Hospital 2000 to 2002 were screened prospectively. Patients with clinical CHF, echocardiogram proven left ventricular dysfunction in the absence of significant valve abnormality and not previously diagnosed with CHF were identified. All patients who survived to discharge were managed in a dedicated CHF out patient clinic. Electronic hospital records were searched after 6 years and date of death determined.

Results

199 incident cases were identified. Mean age 81 (range 70 to 100). 17% mortality at 3 months, (95% CI 12-23%), 29% mortality at 12 months, (95% CI 23-36%), 66% mortality at 5 years, (95% CI 59- 73%). Median survival was 2.6 years. Patients with left ventricular systolic dysfunction had a median survival of 2.4 years and those with preserved LV systolic function 3.5 years.

Conclusions

Older persons who are diagnosed with CHF following acute hospital admission have a high early mortality. Once stabilised in the community prognosis improves. Those with systolic dysfunction appear to have a worse prognosis. Our study did not include younger patients or incident cases diagnosed in the community.

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ASSESSING PRESCRIBING SKILLS IN TRAINEE MEDICAL STAFF: IMPLEMENTATION OF A ROUTINE ASSESSMENT AND REMEDIAL TRAINING STRATEGY

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Introduction

There is increasing recognition that medical graduates feel unprepared for employment, particularly with regards to prescribing. This contributes to medical errors that can result in patient harm. We sought to describe the process and outcomes of a routine assessment of prescribing and remedial training for newly appointed medical trainees.

Methods

All trainees attending Trust induction participated in a compulsory prescribing assessment. The candidate was asked to prescribe specified drugs from a written case scenario of an older patient on a hospital prescription chart. A consensus panel pre-defined 'critical' errors or omissions. Candidates who made errors or omissions were invited to remedial training and reassessment.

Results

120 candidates were assessed, of whom 87 (72.5%) made critical errors or omissions. 69 (79%) of these were reassessed; 55 (79.7%) passed on 2nd attempt, 11 (15.9%) passed on 3rd attempt. The most common critical errors were; prescription of warfarin (59.2%), failure to follow instruction (44.6%) and inappropriate use of abbreviations (39.8%). 47 candidates (38.8%) prescribed amoxicillin in a penicillin allergic patient. F1 doctors performed worse than SHO and SPR doctors ($p < 0.001$, $p = 0.12$) and made more critical errors ($p = 0.003$).

Discussion

It cannot be assumed that doctors starting work in an NHS Trust can prescribe safely. Basic critical errors or omissions were made by all grades of medical staff but particularly F1 doctors. Steps to improve both undergraduate and postgraduate prescribing training should be encouraged.

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CONTINUING DIARRHOEA AFTER TEN DAYS OF ORAL METRONIDAZOLE OR ORAL VANCOMYCIN FOR PRESUMED, HOSPITAL-ACQUIRED CLOSTRIDIUM DIFFICILE COLITIS IN PATIENTS ADMITTED TO MEDICINE FOR THE ELDERLY AT ADDENBROOKE'S HOSPITAL

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Introduction

Elderly patients presumed to have *C. difficile* associated diarrhoea (CDAD) may remain symptomatic despite antibiotic chemotherapy. We examined this clinical problem amongst patients admitted to Medicine for the Elderly services and characterised their inflammatory markers.

Methods

We reviewed fourteen months of infection-control records to ascertain consecutive cases meeting our predetermined definition: Bristol Stool six or seven on day twelve after a positive toxin test in the context of a compatible clinical picture.

Results

Sixty-six admissions (61 patients) were complicated by an episode of CDAD (incidence-rate 15.4 per 10000 patient-days). In 34 admissions (52%, 31 patients) diarrhoea continued beyond day twelve up to a median of 21 days (interquartile range [IQR] 17–47). Antibiotics had been prescribed to 85% in the month prior to admission. Falls had necessitated 21% of the admissions. Twenty-seven percent of cases were treated with metronidazole, 15% with vancomycin and the remainder with metronidazole followed by vancomycin. The median C-reactive protein (CRP) at the onset was 90mg/L (IQR 31–160mg/L). On day twelve the median CRP was 25mg/L (IQR 14–70mg/L) and was lower in 74% of cases.

Conclusions

In more than half our elderly patients treated for CDAD, diarrhoea continued beyond day twelve. The natural history of CDAD in the elderly appears to be different from that in younger adults. This finding perhaps demands the development of a management protocol that is specific to this setting.

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POPULATION PROJECTIONS OF DEMENTIA IN 2029 AND THE ASSOCIATED IMPACT ON HEALTH SERVICES

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Introduction

Dementia is a serious health problem, the prevalence of which increases with age. As the ageing population expands, the prevalence of dementia and associated costs of care will increase. This research aimed to predict the prevalence of dementia in the West Midlands in 2029 and the related financial burden.

Method

Data from the West Midlands Commissioning Business Support Agency was used to estimate dementia prevalence by age group and by West Midlands PCT (2007 – 2008). Estimated percentage increase in population from 2007 to 2029 was used to calculate the predicted dementia prevalence for 2029. West Midlands hospital admission data was used to estimate projected age-standardised costs for people with dementia.

Results

33,000 patients with dementia were residing in care homes between 2007 and 2008 (53% of all dementia patients). The estimated number of patients in care for 2029 is 54,000. The average cost of hospital admissions for dementia patients from 2007 to 2008 is ~£1.8million for each PCT. The net cost of all hospital admissions over this period for patients aged over 65 with dementia in the West Midlands, is over £31million. The estimated total expenditure for 2029 is over £69million.

Conclusions

This predicted expansion in dementia sufferers will place an ever increasing financial demand on the NHS. To accommodate this, a significant increase in resources allocated to dementia care will be required.

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VITAL SIGNS AT THE TIME OF ACUTE HOSPITAL ADMISSION AS DETERMINANTS OF IN-PATIENT DEATH IN THE OLDEST OLD: NORFOLK EXPERIENCE

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Introduction

Little is known about the determinants of in-patient mortality in the oldest old (≥90 years). We examined the relationship between admission vital signs and in-patient mortality in this age group.

Methods

A prospective observational study was conducted in a UK hospital with a catchment population of ~800,000 (November 2008-January 2009). Those ≥90 years admitted to the Acute Admission Unit were included in the study. Univariate and multiple logistic regression analyses were performed to examine the likelihood of dying in hospital by 5-year increase in age, sex, 10/minute increase in pulse rate (PR), 10mmHg decrease in systolic and diastolic blood pressures (SBP and DBP), 5/min increase in respiratory rate (RR), 1 point decrease in GCS and 1°C increase in body temperature (T).

Results

N=254, male=87(34%), mean age=93 years (±2.9). 68(27%) were independent. 37(15%) died as in-patient. Univariate analyses showed age(p=0.60), sex (p=0.10), increased PR(p=0.33) and lower DBP(p=0.32) were not associated with in-patient mortality. Increased RR (p=0.008), lower SBP(p=0.002), lower GCS (p=0.002) and higher T(p=0.056) were significantly associated with in-patient mortality. In the multivariate model, the p values for these four variables were 0.004, 0.01, 0.034 and 0.022, respectively, in predicting in-patient mortality even after adjusting premorbid-Rankin score.

Conclusion

Our findings suggest that readily available baseline observations could be used to predict the outcome of oldest old and will help inform in clinical decision making.

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VITAL SIGNS AT THE TIME OF ACUTE HOSPITAL ADMISSION DO NOT PREDICT INCREASED LENGTH OF STAY (LOS) IN THE OLDEST OLD

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Introduction

Little is known about the determinants of hospital length of stay (LOS) in the oldest old (≥90 years). We examined the relationships between admission vital signs and increased LOS defined as longer than median LOS in this age group.

Methods

A prospective observational study was conducted in a teaching hospital with a catchment population of ~800,000 (November 2008-January 2009). Those ≥ 90 years admitted to the Acute Admission Unit were included in the study. Univariate and multiple logistic regression analyses were performed to examine the likelihood of increased LOS by 5 year increase in age, sex, 10/minute increase in pulse rate (PR), 10mmHg decrease in systolic and diastolic blood pressures (SBP and DBP), 5/min increase in respiratory rate (RR), 1 point decrease in GCS, and 1°C increase in body temperature (T).

Results N=254, male=87(34%), mean age=93 years (±2.9), mean LOS=13days (±13.1) 37(15%) died as in-patient. No significant differences in LOS were observed between those who died and those discharged alive. Age (p=0.66), sex (p=0.53), higher T (p=0.894), increased PR(p=0.16), increased RR(p=0.22), lower SBP(p=0.94) and DBP(p=0.32) and lower GCS(p=0.079) were not associated with longer LOS univariately. Multiple regression adjusting for premorbid-Rankin score did not alter the results.

Conclusion

We have no evidence that admission vital signs predict increased LOS in this age group. Further studies are required to better understand the determinants of hospital LOS in the oldest old.

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TRENDS IN OBESITY AMONG OLDER PEOPLE: DATA FROM THE HEALTH SURVEY FOR ENGLAND

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Introduction

Obesity in older people is associated with frailty, disability and poor quality of life. While the prevalence of obesity in children and younger adults has been comprehensively explored, trends in obesity in older people, particularly the oldest old, are less well established.

Methods

Data come from the Health Survey for England (HSE), a nationally representative survey of individuals living in private households with a new sample drawn annually. Pooled HSE waves from 1993 to 2007 provide data on 41,932 people aged 65 and over, 9,272 of whom are over 80.

Participants with body mass index (BMI) ≥ 30 kg/m² were classified as obese and waist circumference >88 cm (for women) and >102 cm (for men) defined as high.

Results

We found marked upwards shifts in the prevalence of obesity and significant increases in the proportion of participants with high waist circumference. Trends were consistent across genders and age categories. For example, among men aged ≥ 80 years, 20% were obese in 2007 compared to 10.8% in 1993. Among women aged 65 to 79 years, 57.4% had a high waist circumference in 2007 compared to 44.8% in 1993.

Conclusion

Among older people in England, the prevalence of obesity has increased significantly since 1993. In view of the association between obesity and frailty, and the additional impact of truncal obesity, these trends have important health and economic implications.

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FEASIBILITY AND ACCEPTABILITY OF MUSCLE BIOPSY IN EPIDEMIOLOGICAL STUDIES: FINDINGS FROM THE HERTFORDSHIRE SARCOPENIA STUDY

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Introduction

Sarcopenia is associated adversely with disability, morbidity and mortality. Epidemiological study findings suggest influences across the life course are important in determining muscle mass and strength. Our aim was to ascertain the feasibility and acceptability of obtaining muscle tissue from healthy older men to identify cellular mechanisms underlying the life course influences on sarcopenia.

Methods

105 men with documented birth weight participating in the HSS consented for physiological quantification of muscle mass, strength and a biopsy of the vastus lateralis using the Weil-Blakesley conchotome. Tissue was processed for immunohistochemical and molecular studies. Acceptability was ascertained by questionnaire and a pain Visual Analogue Scale (VAS). 100mm indicated severe pain.

Results

Biopsy was successfully carried out in 102 participants. 93 participants provided feedback. The median pain VAS score during the procedure was 7mm (Interquartile range [IQR] 1-34), 4mm (IQR 0-16) one day after the procedure and 1mm (IQR 0-4) 7 days after the procedure. 60 (64%) participants were back to their normal levels of activity one day after the procedure. 85 (91%) found this procedure acceptable and would have the procedure again. There were no serious wound complications.

Conclusion

Muscle biopsy is feasible and acceptable in community dwelling older people participating in epidemiological research. Availability of biopsy tissue will allow morphological and molecular studies to be integrated into an epidemiological study facilitating investigation of mechanisms underlying life course influences on sarcopenia.

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DESCRIPTIVE EPIDEMIOLOGY OF HOSPITAL ADMISSIONS FROM NURSING HOMES (NH)

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Introduction

NH residents have higher prevalence of co-morbidity. In this study we examined the epidemiology and outcome of acute admissions from NH in UK setting.

Methods

A retrospective study was conducted between January 2005-December 2007 for patients admitted from NH (all ages) to a UK DGH.

Results

There were 410 admissions from 316 NH residents (100 males). Mean age = 83.2 (SD 8.36). Nearly 1/3 of admissions from NH were due to pneumonia (130, 32%), 66 (16.1%) were due to neurological conditions (stroke =23), 52 (12.7%) cardiological conditions and 46 (11.2%) UTI. The total numbers of admissions admitted with dementia/confusion and stroke as co-morbid conditions were 114 and 108, respectively. AF (51), CCF (24), CHD (64) and COPD (23) were other common co-morbidities. The percentage of admissions associated with in-patient deaths were 25%, 11.8%, 16.7%, 28.1%, 24% and 23.9% for 49-59, 60-69, 70-79, 80-89, 90-99 years age groups, respectively. 67 out of 316 patients (21.2%) had at least one readmission (maximum 5). 32 (out of 94 total readmissions) occurred within 30 days, 46 within 60 days, 52 within 90 days and 83 within one year.

Conclusions

In-patient mortality of NH admissions is generally high across all ages. Better understanding of what are the determinants of in-patient death and re-admissions from NH has potential in providing useful information to help set up appropriate care setting for this frail population.

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RESPIRATORY RATE AND SYSTOLIC BLOOD PRESSURE PREDICT IN-PATIENT MORTALITY IN NURSING HOME (NH) RESIDENTS ADMITTED WITH ACUTE MEDICAL CONDITIONS

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Introduction

Hospital admissions from NH are associated with high mortality. We examined the associations between admission vital signs and in-patient mortality in NH residents admitted to hospital.

Methods

A retrospective study was conducted in a UK hospital (January 2005-December 2007). A logistic regression method (forward model selection) was performed to examine the likelihood of dying in hospital by 5 year increase in age at admission, sex, 10/minute increase in pulse rate (PR), 10mmHg decrease in systolic blood pressure (SBP), 5/min increase in respiratory rate (RR), 1 point decrease in GCS, and 1°C increase in body temperature (T).

Results

N= 316 (male=100,32%). Mean age at admission=83.8 years (SD8.36; range=49-99). After forward model selection (5% significance level), only RR and SBP were included in the final model. Both low SBP (OR 1.25;95%CI:1.13-1.39) and high RR(1.75;1.40-2.20) significantly predict in-patient death. Mortality status is correctly predicted for 79% of patients in the study using these two parameters. Stratified analyses showed that higher RR (1.91;1.19-3.08) in males and lower SBP(1.36;1.18-1.57) and higher RR (1.89;1.43-2.51) in females predicted mortality. Age stratified analyses showed RR(1.85;1.29-2.66) (<85years) and low SBP(1.36;1.17-1.58) and RR (1.72;1.27-2.32)(≥85 years) are significantly associated with in-patient mortality.

Conclusion

Admission SBP and RR are strong predictors of in-patient mortality for NH residents. These simple and readily available parameters could be potentially useful in clinical decision making in this population.

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ASSOCIATION BETWEEN ADMISSION VITAL SIGNS AND HOSPITAL LENGTH OF STAY (LOS) IN PATIENTS ADMITTED FROM NURSING HOMES (NH)

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Introduction

The hospital LOS of patients admitted from NH is more likely to be influenced by illness rather than social factors compared to free-living frail older people. We examined the relationships between admission vital signs and increased LOS defined as longer than median LOS in patients admitted from NH.

Methods

A retrospective study was conducted in a UK hospital (January 2005-December 2007). Those admitted to Acute Admission Unit from NH and discharged alive were included in the study. A logistic regression method with forward model selection was performed to examine the likelihood of longer than median LOS by 5 year increase in age at admission, sex, 10/minute increase in pulse rate(PR), 10mmHg decrease in systolic blood pressure (SBP), 5/min increase in respiratory rate(RR), 1 point decrease in GCS, and 1°C increase in body temperature(T).

Results

N= 238 (male=69). Mean age = 83.6(SD 8.56; Range= 51-99) years. Median LOS =4 days (IQR=8 days). None of the vital signs examined were associated with longer LOS in the whole sample and sex-stratified analyses. Age stratified analyses however showed that every decrease in 10 mmHg of SBP (OR 1.16;95%CI:1.01-1.34) and every one year decrease in age (1.12;1.01-1.24) were significantly associated with longer LOS in <85 and >=85 years of age, respectively.

Conclusion

Further studies are required to better understand the determinants of LOS for NH residents admitted with acute medical conditions.

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CARDIOPULMONARY RESUSCITATION IN HOSPITALISED ELDERLY PATIENTS; ARE WE ACTING IN THEIR BEST INTERESTS?

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Introduction

Delivering cardiopulmonary resuscitation (CPR) places enormous pressure on hospital staff and resources. Many healthcare systems provide this treatment for all inpatients unless there is an advance directive stating that CPR is inappropriate. The UK Resuscitation Council guidelines (2007) advise healthcare staff to consider the burden of CPR as well as benefits whilst acting in the patients best interests. Recently published data have identified comorbidities associated with poor outcome.

Methods

We reviewed the casenotes of 80 hospital inpatients for whom the CPR team was called during two separate intervals in 2008 and 2009. Our objectives were to assess the survival rate and to document the clinical features of these patients in order to ascertain their prior likelihood of survival after CPR.

Results

CPR was performed in 72 patients, 54% male. 88% >65yrs (38% >80 yrs). Overall survival; 4%. Listed disabilities and comorbidities included prior dependency on carer support; 75%, chronic kidney disease level ≥3; 36%, COPD; 29%, cancer diagnosis; 24% and left ventricular moderate/severe impairment in 19% respectively.

Conclusions

Survival rate was very low. The majority of patients were elderly and a significant proportion had comorbidities which have previously been shown to be associated with poor outcome. In order to act in the patients best interests we could be more selective in deciding who is 'for CPR' and with better selection the survival rates may improve.

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IN-PATIENT MORTALITY PATTERN OF OLDER PATIENTS ADMITTED FROM CARE HOMES

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Introduction

High mortality rate of patients admitted from care homes raises concerns around appropriateness of acute admissions from care homes.

Methods

A retrospective study was undertaken between January-June 2005 in a large hospital in England (catchment population of ~800,000). We recorded the causes of death for care home residents and categorised as inevitable due to terminal illness (deaths within 3 days), potentially predictable (within 4-7 days), likely to be appropriate for acute medical intervention (after 7 days).

Results

Over the 6 month period, 340 out of a total of 3772 admissions to medicine for the elderly were from care homes (9.0%). Of these 223 were from residential and 117 from nursing homes (5.9% and 3.1%, respectively). 93 patients (27.3%) died during the index admission, 40.8% within 3 days, 16.1% at 4-7 days and 43% at 8-28 days. The most common causes of death were pneumonia (31.5%), stroke (21.0%) and cardiac failure (13.5%). Care home patients who died had numerous underlying medical co-morbidities including end stage cardiac and respiratory failure, stroke and metastatic cancers.

Conclusions

The high proportion of deaths appeared to be potentially predictable in this population. In care home residents with high co-morbidity, avoidance of acute admissions by providing palliation in the community may be appropriate for some selected care home residents. Further studies are required to better understand the determinants of inevitable and predictable deaths in this population.

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FALLS AND OLDER PEOPLE: THE MEANING OF FALLS, HEALTH STATUS, QUALITY OF LIFE

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Introduction

This study investigated older people's experiences of a recent fall, their interpretation of the fall and its impact on their health, quality of life, care networks and service use to inform future service delivery.

Methods

A convenience sample of 27 older people who had a recent fall from two primary care trusts was interviewed. Semi-structured qualitative interviews were conducted and repeated at 2 to 3 months follow up to detect change over time and repeat falls. Content analysis of transcribed interviews identified key themes.

Results

The majority of people fell indoors (n=23), for a majority it was a repeat fall (n=22) with more than half of all being alone when they fell (n=15). Participants had a higher mean age and more injurious falls in PCT 1 compared to PCT 2 (n=12, mean age 87 years vs. n=15, mean age 81 years). The majority of non-injurious falls did not require hospital admission. Falls resulted in a decline in health status, affected ability to undertake activities of living, lifestyle and quality of life. Where people understood the reasons why they fell, they accepted the fall, retained their autonomy and continued with activities. Those who did not reflect or understand why they fell restricted their activities.

Conclusions

Helping people to understand why they fall helping with prevention and rehabilitation. Local informal care support networks are as important as formal care.

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COMMUNITY FALLS: A RANDOMISED CONTROLLED TRIAL

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Introduction

Many older people who fall call an emergency ambulance but are not subsequently taken to hospital. We undertook a randomised controlled trial of a home based fall prevention service for this group.

Methods

People aged >60 who had fallen and called an emergency ambulance but were then not taken to hospital were eligible. The intervention group was referred to a home-based fall prevention rehabilitation service and the control group received medical and social care as usual. The primary outcome was rate of falling over 12 months, ascertained by postal monthly diaries.

Results

204 people were recruited over 12 months, 102 in each group. The participants had a high prevalence of falls risk factors (for example, mean age 83, 99 (48%) had more than 2 previous falls in the last year, 116 (57%) were taking >4 drugs). All 12 falls diaries were returned by 155 (76%) participants, 80 (78%) in the intervention group and 75 (74%) in the control group, and 89 (87%) participants in the intervention group received the intervention as per protocol. The incidence rates of falls in the intervention and control groups were 3.46 and 7.68 per year respectively. The incidence rate ratio was 0.45 (95% CI 0.35 to 0.58, P<0.001).

Conclusion

This group had a high rate of falls and benefited from a home based fall prevention service.

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A MULTICENTRE RCT OF A DAY HOSPITAL FALLS PREVENTION PROGRAMME FOR COMMUNITY DWELLING OLDER PEOPLE

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Introduction

Falls are a major public health issue. Most UK falls prevention programmes are reactive, rather than directed towards people at high risk on the basis of screening. The effectiveness of falls prevention programmes for people in primary care at risk of falling has not hitherto been evaluated.

Method

We carried out a multicentre RCT of falls prevention programmes based in three day hospitals in England, for people identified by screening using a validated postal screening questionnaire to be at high risk of falls. Participants were randomised to a falls prevention service, consisting of a medical assessment, strength and balance training and a home hazards review, or to a control group (falls advice only). The primary outcome was the rate of falls over 12 months ascertained using a monthly falls diary.

Results

6133 people were screened, 1481 were at high risk of falls, 364 of which were recruited to the RCT and randomised: intervention (n=183), control (n=181). 37% of those allocated to the falls prevention programme attended six or more sessions.

The rate of falls in the control group was 2.0 falls per person-year compared to 1.7 falls per person-year in the intervention group, adjusted IRR 0.73 (0.51-1.03), p=0.071. There were no significant differences between the groups in terms of the proportion of fallers, recurrent fallers, medically verified falls, injurious falls, time to first fall, function or quality of life.

Conclusions

The magnitude of the reduction in falls risk observed is compatible with that seen in other fall prevention studies, and so this study may have been underpowered. At present, there is insufficient evidence for health care commissioners to recommend screening and intervention for falls in this manner. Further work to improve compliance with falls prevention programmes, is warranted.

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A PROSPECTIVE EVALUATION OF A POSTAL FALLS RISK SCREENING TOOL

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Introduction

We carried out a prospective evaluation of a modified version of the Falls Risk Assessment Tool (mFRAT).

Methods

A prospective cohort study design was used, involving participants aged 70+ invited to participate by post by their GP.

Exclusions: living in a care home, receiving of end of life care, attending a falls prevention programme, unable to provide consent.

The mFRAT was collected at baseline, falls diaries were collected monthly for 12 months.

The mFRAT consisted of eight items (fall in the previous year, ≥4 medications, stroke, Parkinson's disease, problems with balance, proximal muscle weakness, use of mobility aid and housebound/not housebound). Previous fall or ≥2 other risk factors denoted high falls risk.

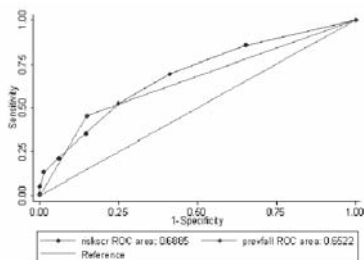
ROC analyses were undertaken for the outcome of having a fall during follow up.

Results

6133 individuals aged 70+ were registered with eight participating general practices; 5289 were eligible, 2846/5289 (54%) responded. 167/1105 (15%) high risk and 168/1365 (12%) low risk respondents participated. 134 participants completed 12 months follow up and were eligible for analysis.

A ROC analysis using previous fall alone compared to mFRAT is shown in Figure 1. The two models overlap: mFRAT AUC 0.69 (95% CI 0.63-0.75), previous fall AUC 0.65 (95% CI 0.60-0.71).

Figure 1 ROC curves comparing risk score and previous fall only



Conclusions

The mFRAT was no better than just using previous fall alone as the predictor for future fall.

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EFFECTIVENESS OF A COMMUNITY EXERCISE PROGRAMME FOR PHYSICALLY FRAIL ELDERLY PEOPLE ASSISTED BY HEALTHY OLDER VOLUNTEERS

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Introduction

Many programmes have been reported to improve physical function among elderly people. However, it is reported that the function improved could not lead to a more active lifestyle without emotional stabilization, and that activities with volunteers improved morale and self-efficacy of the elderly. The purpose of this study was to clarify the effectiveness of a community exercise programme for physically frail elderly people assisted by healthy older volunteers.

Methods

136 participants were provided in this study, who were living at home and aged over 65 years. The average age was 77.7+/- 6.2. Participants (N=59) in the intervention group had an exercise programme with healthy older volunteers, and those (N=77) in the controlled group performed the programme by themselves. The programme comprised of a weekly exercise class of 2 hours for 24 weeks, and was led by public health nurses supervised by senior PTs. Physical function and psychological status between the two groups were compared.

Results

Baseline assessments showed no significant differences between the 2 groups, and all the scores of SF-36 were lower than averages of the Japanese population. After the intervention, the programme significantly improved physical function and psychological status, and all the scores of SF-36 also rose above the averages.

Conclusion

The results suggest that the intervention programme was effective and efficient enough to operate in the community although there are some limitations due to study design.

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EXERCISING WITH COMPUTERS IN LATER LIFE (EXCELL) – PILOT STUDY

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Introduction

The incidence of falls is increasing. This study established the feasibility of a 12-week exercise programme using the Nintendo® Wii-Fit to improve balance.

Method

Community-dwelling fallers over 70 years were recruited (n=15). Baseline assessment included Falls Efficacy Scale International (FES-I), Berg and Tinetti Balance Scales and Wii-fit age. The Wii-Fit group attended twice weekly for computer-based exercises. The Attitude to Falls-Related Interventions Scale (AFRIS) was measured on programme completion. We attempted to recruit controls from falls group.

Results

Recruitment of controls was abandoned after 3 months due to poor uptake and high drop out rate. Mean length of intervention exercise session was 14 mins 51 secs, with 80% of participants attending 75% or more of the sessions. Two dropped out prior to the end of intervention. Mean (SD) AFRIS was 34.3 (7.2).

Outcome Measure	Baseline Mean (SD)	Week 4 Mean change (95% CI)	Week 12 Mean change (95% CI)
Berg	44.3 (9.4)	4.4 (0.9, 8.0) *	0.4 (-3.8, 4.7)
Tinetti	13.4 (2.9)	0.3 (-1.0, 1.5)	0.6 (-0.9, 2.1)
FES-I	31.7 (12.8)	1.3 (-3.8, 6.5)	1.8 (-5.5, 9.0)
Wii Age	72.2 (8.0)	Not assessed	-14.8 (-29.0, -0.7) **

* p=0.02, ** p=0.03, all others p=NS

Conclusions

Wii-Fit exercise was acceptable to older people with a history of falls and showed potential to improve balance. An adequately powered randomised controlled trial would provide further information.

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IMPROVEMENTS OF MUSCLE STRENGTH AND BALANCE FUNCTION OF PHYSICALLY FRAIL ELDERLY PEOPLE AFTER INTERVENTION OF A NURSE-LED COMMUNITY EXERCISE PROGRAMME FOR PREVENTION OF FALLS

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Introduction

Many exercise programmes for prevention of falls have been reported to improve muscle strength and balance function of the lower extremities among physically frail elderly people. In order to prescribe effective and efficient exercise programmes, it is necessary to know how the functions improve in process of time. The purpose of this study is to clarify characteristics of improvements of muscle strength and balance function.

Methods

Participants included 259 persons who were living at home, aged over 65 years, with high risk factors for falls, and without dementia. The exercise programme was provided by public health nurses supervised senior physiotherapists. This comprised a weekly exercise class of 2 hours for 4 months, supplemented by daily home exercises. Physical function was measured before exercise, and 1, 2, 3, and 4 months after exercise. The Geriatric Depression Scale (GDS-15) was assessed before and after exercise.

Results

Average age of the participants was 79.0 +/- 7 years old. GDS-15 before exercise was 4.4 +/- 3.1. Chair standing test and maximal step length were improved significantly after 1 month of exercise. Functional reach test and one leg standing test were improved significantly after 2 months and 3 months of exercise, respectively.

Conclusion

The results suggested that muscle strength of the lower extremities would improve after 1 month of exercise, and that it would take more 1 or 2 months to improve balance function.

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FALLS IN OLDER PERSONS PRESENTING TO EMERGENCY DEPARTMENT (ED)

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Aims

Evidence suggests that fallers presenting to the ED represent a high risk population who could benefit from multidisciplinary intervention. The service implications for referring ED fallers for further assessment are likely to be significant. We sought to quantify the problem in a metropolitan university hospital.

Methods

Data was collected on consecutive people aged 70+ yrs to the ED between April 2007 and March 2009. Data included age, gender, place of residence, previous falls, and admissions in the preceding twelve months. Factors influencing admission were analysed.

Results

19,087 presentations were recorded. The mean age was 80.7 years. 17% of older attendees and 7% of admissions presented with a fall equating to an average of 135 ED presentations and 56 admissions per month. Of those admitted with a fall, 46.3% were admitted to Aged Care with a further 40.7% admitted to Orthopaedic Surgery. Independent predictors of admission were increasing age, living in residential aged care facilities and previous hospital admissions.

Conclusion

Older people admitted to hospital after a fall are predominantly admitted to Aged Care or to a service where geriatric input is commonplace. However 79 fallers per month are discharged home creating an unattainable service commitment for most local Falls Services. There is a need to streamline ED referrals to Falls Services to ensure that high risk populations with potentially remediable problems are referred for further assessment.

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FRAIL OLDER PEOPLE AT THE INTERFACE

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Background

There is an international move to minimise emergency hospital admissions and length of stay, by maximising care closer to home. Many acute hospitals include an acute medical admissions unit (AMU) which facilitates rapid assessment and if appropriate, discharge of emergency patients.

Methods

We followed up patients in whom there were concerns about functional status being sent home from one AMU. This population had been assessed by the medical team, and then referred to a nurse led Integrated Discharge Team. They reviewed current and prior function, social circumstances and rehabilitation needs, arranging support and interventions as required.

Results

184 patients were studied. Their mean age was 82.1 years (SD 8.0), 62 (34%) were male. 67 (36%) had a fall, 43 (23%) had cognitive impairment, 42 (23%) immobility, 109 (59%) polypharmacy and 7 (4%) a pressure sore.

102/184 (55.4%) were readmitted and 48 (26.1%) died in the following 12 months. The readmission rate was 2.5 (95% CI 2.1-3.1) and the mortality rate 0.9 (95% CI 0.7-1.2) per 1000 person-days.

Conclusions

These data show that patients with functional decline or other geriatric syndromes represent an especially vulnerable sub-population of those attending AMUs. Their mortality is substantial and the high readmission rates suggest on-going complexities.

Our findings suggest that additional services are required, for example specialist geriatric expertise, with a greater focus on end of life care and advance care planning.

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CO-ORDINATED CARE PLANNING (CCP) BETWEEN PRIMARY-SECONDARY CARE INTERFACE AND SECONDARY-PRIMARY CARE INTERFACE MAY IMPROVE END OF LIFE EXPERIENCE OF FRAIL CARE HOME RESIDENTS WITH MULTIPLE-CO-MORBIDITIES

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Introduction

Acute hospital admissions from care homes can appear inappropriate because of the substantial number of deaths occurring shortly after acute admission in this population.

Methods

We identified and surveyed 8 care homes within one PCT which were frequent users of acute admission services of our hospital. Current care in these residential and nursing homes was assessed using a questionnaire. The questionnaire included assessment of perceived access to services e.g. palliative care nurse, district nurse, GPs by care home staff. A senior consultant physician assessed the proportions of seriously and terminally ill residents defined as an expected life expectancy of less than 12 months and 3 months respectively.

Results

Of the 318 beds in the 8 care homes, 27.3% of beds were occupied with residents who were classed as "seriously ill" and 10.3% were judged as "terminally ill". Several factors were highlighted as contributing to 999 calls and acute hospital admissions: poor access to health records, lack of GP visit out of hours, poor access to specialist nurses (district nurse, palliative nurse) in addition to advanced care planning including decisions on resuscitation status, patient preference for place of death, use of the Liverpool Care Pathway for the dying.

Conclusions

By ensuring adequate support and appropriate care pathways for the terminally ill residents of care homes, we may improve their end of life experience by limiting less appropriate admissions.

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TREATMENT OF OAB IMPROVES CONDITION SPECIFIC QUALITY OF LIFE IN >75 YEAR OLD PATIENTS

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Introduction

Overactive bladder (OAB) has the most negative impact on quality of life (QoL) [Abrams, P. et al. Am J Manag Care 2000;6:S580-90] and older people experience more severe disease than young. [Perry S et al. J Public Health Med 2000;22:427-434]. Darifenacin is an effective antimuscarinic agent for the treatment of OAB. This post-hoc analysis assessed treatment of OAB on QoL in patients ≥ 75 in a study of patients ≥ 65 y [Chapple C et al. Curr Med Res Opin. 2007;23:2347-58].

Method

Subjects ≥ 65 y received either darifenacin (D) or placebo (P) for 12 weeks. Starting dose was 7.5 mg with optional escalation (15mg) at two weeks. QoL was assessed at baseline and endpoint. Change in QoL (OAB-q) was compared between groups in subjects ≥ 75 y.

Results

139 subjects (n=82 D) aged 75 to 89 (79% ♀) were included. Differences in mean OAB-q scores (table) showed improvement. The rate of adverse events was 57% in the D group versus 39% in P group.

Domain	Δ OAB-q		Difference: D vs P (ANCOVA)	P value
	D	P		
Total OAB-q	19.5	12.2	12.3	0.002
Symptom severity	-26.6	-15.3	-16.7	<0.001
Coping	23.3	15.1	14.2	0.003
Concern	22.4	13.0	15.6	<0.001
Sleeping	18.8	14.7	7.4	0.097
Social	10.2	3.9	9.5	0.008

Conclusions

Darifenacin treatment is associated with a significant improvement in QoL in older patients with OAB; especially in the most bothersome aspects of the condition.

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COMPETENCE & SELFHOOD IN DEMENTIA: IMPLICATIONS FOR DECISION MAKING

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Introduction

Decisions regarding end-of-life treatment for patients with dementia (PWD) remain contentious. While previous research in this context has predominantly been conducted within a quantitative framework, little is known about the reasons underlying health professionals' beliefs; not least the ethical/philosophical concepts which may complicate decision-making in this patient group.

Methods

Semi-structured interviews were conducted with 6 participants (comprising: Medicine for the Elderly [MFE] Consultants, Psychogeriatricians, and MFE Specialist/Psychiatric Liaison Nurses) working within the Norfolk and Norwich University Hospital NHS Trust. The interviews employed open-questions relating to: competence, autonomy and selfhood, quality of life, and the role of health professionals and relatives in decision-making. Audiotapes of the interviews were transcribed and responses coded by hand using interpretative content analysis.

Results

Dominant themes among participants' responses related to the difficulties posed by assessing quality of life and defining 'best interests' in PWD, and the role of relatives in end-of-life treatment decisions (EOLTDs).

Conclusions

The ethical and philosophical debates concerning dementia are real issues influencing EOLTDs in clinical practice. In particular, this research highlights the increasing role relatives play in influencing EOLTDs, underscoring the benefits and disadvantages associated with incorporating the 'family perspective'. There is a need for open and early dialogue regarding end-of-life issues, as well as greater training for health professionals with regard to this difficult task of communication if optimal end-of-life care for PWD is to be achieved.

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CLINICAL PRACTICE AND PERCEIVED BARRIERS WITH REGARDS TO PATIENT INVOLVEMENT IN RESUSCITATION DECISION-MAKING IN THE ELDERLY: SEMI-QUALITATIVE STUDY

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Introduction

Sensitive advanced discussion of "Do Not Attempt Resuscitation" (DNAR) decisions is encouraged by guidelines, and welcomed by patients; however, this discussion often does not happen. Current clinical practice and perceived barriers to older patients' involvement in DNAR decisions in primary and secondary care settings is poorly researched.

Methods

A semi-qualitative questionnaire was distributed to a group of Care of the Elderly physicians (n = 19) and General Practitioners (n = 30) in Norfolk. A reminder was sent via email at one and three weeks after distribution. Responses were analysed using both quantitative and qualitative (thematic) approaches.

Results

Response rate was 48.98% (24/49). Hospital-based clinicians make DNAR decisions significantly more often than GPs (average 4.04 consultations per week vs. 0.28 per week, p < 0.01), but discuss decisions with patients in less than 25% cases. GPs thought patient involvement was more important, and felt they had better understanding of patient wishes due to long-term relationships. Capacity was seen as the biggest barrier to patient involvement by both groups. Other perceived barriers included patient lack of understanding, communication difficulties and practical concerns.

Conclusions

Further support and training could help clinicians improve DNAR decision-making practice. Although DNAR orders are more pertinent during acute admission, advanced discussion in Primary Care with older people before they lose capacity has great potential to increase patient participation in resuscitation decision-making.

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OLDER PEOPLE'S EXPERIENCES OF DRUG USE ACROSS THE LIFE COURSE: AN EXPLORATORY STUDY OF DRUG USE, HEALTH, QUALITY OF LIFE, RELATIONSHIPS, SERVICE USE AND AGEING

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Introduction

Older people with a continuing history of drug and alcohol misuse comprise a vulnerable population. This exploratory study has looked at drug use over the life course and has examined effects on health status, quality of life, relationships and use of services in relation to ageing.

Methods

A convenience sample of 11 people aged 49 years and above in contact with voluntary sector drug treatment services participated in qualitative semi-structured taped interviews.

Results

Preliminary findings indicate that drug use across the life course can have negative impacts on health status, quality of life, family relationships and social networks. Two categories of users were identified, early onset use of illicit drugs and later onset use due to impacts of life events and relationships. A range of substances were used currently and across the life course with no single gateway drug identified. Life review and reflection were common in keeping with ageing populations, along with regret of ever having started to use drugs. Living alone and accommodation made them susceptible to social isolation and they reported experiences of death and dying of contemporaries and family members earlier than usual in the life course.

Conclusions

Older people who continue to use drugs require support from services suited to the needs of older people. Further research into the specific needs of this ageing population is warranted and services developed to meeting them.

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PREVENTING RECURRENT URINARY TRACT INFECTIONS IN OLDER WOMEN: CRANBERRY OR TRIMETHOPRIM?

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Background

Prophylaxis of recurrent urinary tract infections (UTI) involves the use of long-term, low dose antibiotics. A recent Cochrane review supports the role of cranberry products in preventing recurrent UTI in women. No studies have compared the efficacy of cranberry products against antibiotics.

Methods

Women ≥ 45 years with ≥ 2 antibiotic treated UTIs in the previous 12 months were randomised to receive either 500mg cranberry extract or 100mg trimethoprim daily for 6 months in a double blind trial. Primary outcome was the proportion of women in the two groups who developed recurrent UTI.

Results

39/137 (28%) of participants (mean age 63 years) had an antibiotic treated UTI (25 in cranberry group and 14 in trimethoprim group). Relative risk was 1.616 ($p=0.084$; 95%CI 0.93 to 2.79). Time to first recurrence of UTI was not significantly different between groups ($p=0.10$). Median time to recurrence in those who developed a UTI was 84.5 vs. 91 days in the cranberry and trimethoprim groups respectively ($p=0.48$). Relative risk of withdrawal from study was 0.54 ($p=0.21$; 95%CI 0.19 to 1.37) in the cranberry group compared to the trimethoprim group.

Conclusions

Although trimethoprim had a limited advantage over cranberry extract in preventing recurrent UTIs in older women, this came at the cost of more withdrawals from adverse events. With increasing concerns about antimicrobial resistance, a natural product like cranberry may be an attractive option for some older women.

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CAN YOU SPOT A “BED BLOCKER” IN 5 MINUTES FLAT?

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Introduction

Older adults are major users of hospital resources. To assure short hospital stays and best usage of resources, identification of patients likely to require rehabilitation and home support is needed.

Methods

Cohort study of elderly patients admitted to medical wards. Data were collected on modified early warning score (MEWS), activities of daily living (Katz), MRC dyspnoea score and performance status (WHO score).

Primary outcomes -death, length of hospital stay > 30 days and rehabilitation needs.

Secondary outcome - identification of patients with complex discharge needs.

Results

137 patients over the age of 75 were analysed. 23 died, 40 had WHO scores indicating good performance status, only 32 had a Katz of 6 (independent) and 67 had low MRC scores. 54% stayed 30 days or more. 24 were discharged to rehabilitation unit.

Independence as measured by Katz was associated with shorter length of stay ($p < 0.005$) for patients discharged alive. Multiple regression analysis suggested dependence of length of stay on MRC dyspnoea score and Katz but not on WHO score or MEWS. None of the parameters measured allowed predicting transfer to a rehabilitation ward.

Conclusion

The subset of patients with complex discharge needs can be identified on admission.

Simple tools such as Katz and MRC dyspnoea score could guide medical staff and might allow for proactive discharge planning and shortened length of hospital stay.

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HOW MOTIVATED ARE OLDER PEOPLE IN A REHABILITATION SETTING?

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Introduction

Though patient's motivation may contribute towards rehabilitation outcomes, little is known on older people's perception towards their own motivation in rehabilitation settings. This study compares older people's self-perception of motivation (or apathy) to the perceptions of healthcare professionals in a community hospital (CH).

Methods

Patients undergoing post-acute rehabilitation in a CH were studied. Those with depressive illness, without rehabilitation potential, undergoing terminal care and MMSE < 24 were excluded. Lack of motivation or apathy was defined by an Apathy Evaluation Scale (AES) >38 out of 72, scored independently by patients, nurses and physiotherapists.

Results

Of those eligible, 27 patients participated (mean age 82.4 \pm 6.4 years). The mean patient's AES (30.6 \pm 6.4) was significantly less than the mean nurse's (38.04 \pm 8.6; $p < 0.001$) and physiotherapist's scores (38.63 \pm 8.8; $p < 0.001$). Inter-rater agreements (kappa) of AES scores between patient's and nurse's, patient's and physiotherapist's, nurse's and physiotherapist's were 0.10 (poor), 0.19 (poor) and 0.7 (good) respectively. 71.4% of patients with Barthel Index (BAI) < 12 and 57.1% with Geriatric Depression Scale (GDS-15) \geq 5 were scored AES > 38 by nurses and physiotherapists respectively compared to 14.3% of patients.

Conclusion

Nurses and physiotherapists significantly overestimate apathy or 'lack of motivation' in older people undergoing rehabilitation compared to the patient's self-perceptions. Healthcare professionals must exercise caution and undertake proper evaluations before labelling older people as 'lacking motivation' in rehabilitation settings.

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EARLY BLEEDING COMPLICATIONS IN PATIENTS ADMITTED WITH ACUTE ISCHAEMIC STROKE

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Introduction

Antiplatelet therapy (APT) is key to the secondary prevention of acute ischaemic stroke but is not without risk. Long-term APT increases the risk of gastrointestinal (GI) bleeding, which immediately following a stroke may be as high as 3%.

Methods

Consecutive patients admitted with acute ischaemic stroke and commenced on oral APT within 7 days were eligible for inclusion. All cause bleeding events were determined at 4 weeks and categorized as major or minor according to the need for medical intervention.

Results

146 patients recruited: median age 72.5 years (IQR=16.25). At 4 weeks 4 (2.7%) had experienced a major bleeding episode and 22 (15%) minor bleeding episodes. APT was stopped (3) or modified (1) in all patients with major bleeds and modified for 2 with minor bleeds. 3 major bleeding episodes were due to GI haemorrhage; 2 of these patients were taking APT prior to admission. Age was a significant risk factor for major GI bleeding; median 88 years compared to 72 years ($p < 0.01$, MW U-test).

Conclusion

The overall bleeding risk associated with APT in acute stroke was high. Previous studies have focused on major bleeding events. The impact of so-called minor bleeding, however, on older people and their concordance with APT is not clear. Such factors need to be considered when assessing the risk-benefit ratio of APT in older people.

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IS INAPPROPRIATE PRESCRIBING ASSOCIATED WITH ADVERSE DRUG EVENTS IN OLDER PEOPLE?

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Introduction

To date, there is mixed evidence that the prescription of potentially inappropriate medications (PIMs) in older people is associated with adverse drug events (ADEs). STOPP (Screening Tool of Older Persons' Prescriptions) is a newly-validated tool to detect PIM prescription. We compared the prevalence of ADEs attributable to STOPP PIMs with ADEs attributable to PIMs listed in the established Beers' criteria.

Methods

We prospectively studied 600 consecutive patients aged ≥ 65 years on admission to hospital. Suspected ADEs were referred to 4 experts in geriatric pharmacotherapy; consensus agreement of $\geq 3/4$ was required for study inclusion. ADE avoidability was assessed using Hallas criteria. Proportions of potentially avoidable/avoidable ADEs which could have been prevented by the prior application of STOPP and Beers' criteria were determined.

Results

Median patient age was 77.5 years, interquartile range (IQR) 72-83. Median number of medications was 7, IQR 5-10. 329 ADEs were identified in 158 patients; 235 (71%) were potentially avoidable/avoidable. 56% of patients were prescribed a STOPP PIM: 68% of potentially avoidable/avoidable ADEs were attributed to STOPP PIMs. 29% of patients were prescribed a Beers' PIM: 29% of potentially avoidable/avoidable ADEs were attributed to Beers' PIMs.

Conclusions

PIMs are commonly prescribed to older patients. Over two-thirds of potentially avoidable/avoidable ADEs may have been prevented by prior application of STOPP criteria. Routine clinical application of STOPP may represent a simple, cost-effective practice to reduce PIM-related morbidity and mortality.

SCREENING FOR MENTAL HEALTH PROBLEMS ON HOSPITAL WARDS

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Introduction

Mental health problems in older people predict mortality, institutionalisation and length of hospital stay. We set out to identify the prevalence of mental health problems of older patients admitted to our hospital as emergencies, identified by a simple screening procedure.

Method

Setting: an 1100-bed secondary/tertiary level teaching hospital. Participants were recruited over six weeks in April/May 2009. Patients over 70 years old, admitted as emergencies onto 12 acute hospital wards were included. Subjects were screened using an abbreviated mental test (AMTS), GDS-4 depression screen, PRIME-MD anxiety screen, CAGE questionnaire and bespoke questions designed to capture an existing psychiatric diagnosis: is the patient unresponsive to questions, too agitated to answer questions or has behaviours associated with psychosis?

Results

179/248 (72%) were screened.

Cognitive impairment (AMTS \leq 7)	53 (30%)
Existing psychiatric diagnosis/psychotic behaviour (Bespoke question = Yes)	30 (17%)
Depression (GDS4 \geq 1)	47 (26%)
Anxiety (PRIME-MD \geq 1)	76 (42%)
Alcohol misuse (CAGE positive \geq 2)	1 (1%)
Cognitive impairment and depression	23 (13%)
Cognitive impairment and anxiety	28 (16%)
Cognitive impairment, depression and anxiety	18 (10%)
Any of the above	119 (66%)

Conclusion

In our cohort, over half the older people admitted as an emergency onto an acute hospital ward screened positive for one or more mental health problems. Given this high prevalence, further work is needed to elucidate these conditions and to seek opportunities to ameliorate their impact.

IS SLOW VITAL CAPACITY A USEFUL SUBSTITUTE FOR FORCED VITAL CAPACITY IN ELDERLY PATIENTS WITH COGNITIVE IMPAIRMENT?

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Introduction

Most patients with moderate cognitive impairment are unable to perform forced spirometry. It has been suggested that slow vital capacity (SVC) is easier to perform than forced vital capacity (FVC) because it requires less understanding and co-ordination. We conducted a study to determine whether that assertion is correct.

Methods

We studied 83 inpatients, mean age 83 (range 67-95, 51 female). They consented to have measurements made of FVC, SVC and the Mini Mental State Examination (MMSE). The spirometry was conducted and analysed using the European Respiratory Society / American Thoracic Society standards; spirometry graphs were analysed by a separate observer.

Results

Of the 83 subjects, 38 were able to do both FVC and SVC and 32 were unable to do either. The overall concordance was 84%. 12 were able to do SVC but not FVC (8 due to cough, 2 due to weakness and 2 had an MMSE $<$ 24 with poor co-ordination). Only 1 could do FVC but not SVC. Overall inability to do either FVC or SVC was predicted by an MMSE $<$ 24/30 ($P < 0.0001$) with a sensitivity of 88% and specificity of 67%.

Conclusion

SVC is not a usable substitute for FVC for elderly patients with cognitive impairment but is of some utility for those who cough excessively during forced spirometry. An MMSE $<$ 24 is predictive of inability to perform FVC and SVC.

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PRIOR ANTIPLATELET OR ANTICOAGULANT USE IS NOT ASSOCIATED WITH POOR OUTCOME IN ISCHAEMIC STROKE: A DATA BASE STUDY

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Background

Aspirin usage before ischaemic stroke is associated with marginal benefit in terms of stroke outcome. Whether use of any antiplatelet/anticoagulant alone or in combination is associated with poor outcomes is unclear.

Methods

In-patient death and length of hospital stay were compared between those who took any antiplatelet or anticoagulant (users) and those who did not (non-users) prior to stroke using a hospital-based stroke register (2004-2006).

Results

2166 patients (mean age = 77, sd 11 yrs) with acute ischaemic stroke were included. 1098 (50.7%) were not on any antiplatelet or anticoagulants. There were no significant differences with regards to both outcomes between users and non-users regardless of age or sex.

	Death			LOS (days)		
	Users	Non-users	p	User	Non-users	p
All	220 (20.6)	229 (20.9)	0.88	18 (16)	17 (15)	0.20
By sex						
Males	101 (19.1)	89 (18.1)	0.69	17 (15)	16 (16)	0.26
Females	119 (22.1)	140 (23.1)	0.69	19 (16)	18 (14)	0.40
By age-group						
<65	6 (6.5)	17 (9.6)	0.39	14 (16)	12 (15)	0.32
65-84	117 (17.6)	126 (19.5)	0.38	18 (15)	17 (15)	0.51
>=85	97 (31.3)	86 (31.6)	0.93	20 (16)	21 (16)	0.58

Values presented are means (sd) and number (%)

Conclusion

Antiplatelet/anticoagulant usage prior to ischaemic stroke appeared to have no association with poor clinical outcomes of mortality and increased length of hospital stay regardless of age and sex.

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HELICOBACTER PYLORI INFECTION IN PATIENTS ADMITTED WITH ACUTE ISCHAEMIC STROKE

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Introduction

Helicobacter pylori is the commonest chronic bacterial infection worldwide. Antiplatelet therapy is key to the secondary prevention of stroke but the interaction of H. pylori and aspirin is complex and ensuing gastrointestinal risk uncertain. Even less is known regarding the interaction of H. pylori and other antiplatelet agents.

Methods

Consecutive patients admitted to Sunderland Royal Hospital with acute ischaemic stroke and commenced on oral antiplatelet therapy within 7 days were eligible for inclusion. H. pylori status was determined using antibody titres and stool antigen testing. Gastrointestinal symptoms were assessed using the Long-Form Leeds Dyspepsia Questionnaire (LDQ).

Results

146 patients recruited: median age 72.5 years (IQR=16.25). 67 (55.4%) patients were both antibody antigen positive, 13 (10.7%) antibody positive only, 19 (15.7%) antigen positive only and 22 (18.2%) antibody antigen negative. Samples were unobtainable or equivocal in 25 patients. The LDQ scores showed no correlation with H. pylori status. The median LDQ score was, however, significantly higher in patients taking antiplatelet therapy prior to stroke (3, IQR 0-7.5) than in non-users (1, IQR 0-6) (p<0.05, M-W U-test).

Conclusion

In this cohort of acute stroke patients we found a high prevalence of active or previous H. pylori infection. The relationship between infection and tolerability to antiplatelet therapy is being explored in the ongoing study 'ITCAT: Improving Tolerability and Concordance with Antiplatelet Therapy in Older People'.

STROKE

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WITHDRAWN

Withdrawn

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WITHDRAWN

Withdrawn

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WHAT ARE THE CURRENT “GREY AREAS” OF UNCERTAINTY FOR THROMBOLYSIS FOR ACUTE ISCHAEMIC STROKE IN THE UK? EVIDENCE FROM THE THIRD INTERNATIONAL STROKE TRIAL (IST-3)

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Introduction

IST-3 was designed to address whether a wider group of patients (such as older people) would benefit from thrombolytic therapy. We examined the recent trends of recruitment in IST-3 to assess current uncertainty.

Methods

Detailed methods are available at www.ist3.com. Patients are eligible if: treatment can be started within 6 hours; brain imaging excludes intracranial haemorrhage; consent is obtained; and the clinician believes thrombolysis to be promising but unproven. Randomisation is by secure 24-hour system to either open control or immediate treatment with intravenous alteplase (0.9mg/kg, max total dose 90mg).

Results

By 9 June 2009, 1640 patients had been recruited, 40% from the UK. The total UK quarterly recruitment has increased during years 2007, 2008 and 2009 from 32, 42 and 58 patients respectively. The proportions recruited in the 3-6 hour time window in the UK were 75%, 77% and 63% respectively. The proportions of those aged > 80 years increased in these same years from 47%, to 51% and currently 57%.

Conclusions

As UK stroke services become more organized, there is increased UK recruitment. The publication of the positive results from ECASS-3 (patients treated 3-4.5 hours post stroke and < 80 years old) appear to have increased trial recruitment, and led to more over 80 years olds in the trial, suggesting that clinicians have been encouraged but not convinced by ECASS-3.

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MONITORING THE OUTCOME OF STROKE PATIENTS AFTER DISCHARGE IN THE COMMUNITY (MOAIC STUDY)

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Introduction

A large proportion of stroke patients' experience in dealing with their stroke starts after discharge from hospital. The availability of support services in the community varies within the United Kingdom. The aim of this study was to assess the outcome of a group of stroke patients in Mid Sussex who had limited access to community rehabilitation therapy teams.

Methods

Stroke patients and carers were asked to complete a questionnaire addressing physical abilities, speech, swallowing, and emotional domains prior to discharge from hospital and six months later. Patients who had community services were compared to those who did not.

Results

Over a 6 months period 100 stroke patients (50% males, average age 77 (45-96) years) were admitted to the stroke unit. Seventy five patients (75%) were discharged home. Of those 75 patients, 53 patients (71%) completed both questionnaires. Seventy percent of respondents felt they were inadequately supported by community services. The main concerns of this group who did not have community support related to speech, swallowing, and emotional difficulties. The group of patients who had community support (30%) did have significantly less emotional difficulties in coping with their stroke compared to the group who lacked community support ($p < 0.05$, Fishers exact test).

Conclusion

There is a high level of unresolved speech, swallowing and emotional difficulties among stroke patients who are deprived of community rehabilitation therapy services.

**THE NATIONAL INSTITUTE OF HEALTH
STROKE SCALE (NIHSS) AS A
PREDICTOR OF IN-HOSPITAL
MORTALITY IN ACUTE STROKE**

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Introduction

Stroke is the third highest cause of death in the UK and the biggest single cause of major disability, (Wade D. Royal College of Physicians, 2000). Prediction of mortality is of great value in this complex and resource intensive patient population. The National Institutes of Health Stroke Scale (NIHSS) is a systematic assessment tool that provides a quantitative measure of stroke related neurological deficit (Brott T et al. Stroke. 1989; 20: 864–870). It has been shown to predict mortality in some patient populations (Cheung CM et al, Hong Kong Medical Journal 2008: 14:367-370) but has never been validated in a UK cohort.

Method

A retrospective analysis of 478 consecutive patients admitted to our institution over a 15 month period with a confirmed diagnosis of acute stroke. All information was taken from our stroke database. This data is routinely collected and anonymised, and so ethical approval was not sought.

Results

Of the 478 patients analysed, 226 (47.3%) were male. The median age (range) was 77 (64.9 - 84.4).

NIHSS	Number	In-hospital Mortality (%)
0-5	208	9 (4.3)
6-10	88	4 (4.5)
11-20	103	27 (26.2)
>20	79	39 (49.4)

Conclusions

A NIHSS greater than ten is associated with a large increase in mortality within our population. Further work is needed to characterise the precise prognostic value of the NIHSS.

Friday, 9 October

Platform Presentations

Session I

09:00 - 10:15

ABSTRACT BOOK NOS 95-99

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PERSISTENCE WITH ORAL ANTIMUSCARINICS USED FOR THE TREATMENT OF OVERACTIVE BLADDER IN DIFFERENT AGE GROUPS OF PATIENTS IN GENERAL PRACTICE

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Introduction

Overactive bladder is highly prevalent and often more severe in the elderly [Perry S et al. J Public Health Med 2000;22:427-34]. Antimuscarinics are first line pharmacological treatment, but persistence remains an issue.

Methods

Prescriptions for oral antimuscarinics were analysed over 12 months to November 2008, using a longitudinal UK GP database. Patients had no antimuscarinic within 6 months previously. Patients were tracked until they stopped continuous treatment (interval >1.5 times expected days of therapy of the previous prescription).

Results

Older patients (≥60y) were most likely to persist with therapy (table 1). The highest persistence was seen with solifenacin 10mg.

Table 1: % patients remaining on therapy at 12 months.

	Age group (years)				
	40-49	50-59	60-69	70-79	≥80
Oxybutynin XL (n=448)	22.4	22.9	24.6	26.8	27.6
Oxybutynin IR (n=1094)	16.1	21.6	27.1	22.3	24.2
Solifenacin 5mg(n=1139)	21.7	25.1	32.0	31.3	25.3
Solifenacin 10mg(n=306)	32.6	37.3	45.9	56.6	43.1
Tolterodine XL(n=1603)	19.0	26.2	28.5	34.8	32.1
Tolterodine IR(n=430)	13.5	24.6	15.6	36.3	27.6
Trospium(n=323)	15.4	27.0	31.7	23.7	29.7

oxybutynin data are for generic prescriptions.
IR/XL = immediate / extended release.n= number treated per product (n>45 per age group per product, except trospium n=26 for ages 40-49)
Only oral antimuscarinics with >100 patients included.

Conclusion

Persistence was relatively low for most antimuscarinics at 12 months. Patients ≥60y were more likely to remain on long-term therapy.

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INVESTIGATING BONE QUALITY IN PATIENTS WITH HIP FRACTURE

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Introduction

Hip fracture is the most serious consequence of falls and osteoporosis. However, not all patients demonstrate osteoporosis on DXA. Other factors include bone turnover, microarchitectural, and material property alterations. Increased bone turnover can increase the risk of further fracture independent of bone mineral density measurements (BMD). MicroCT and nanoindentation can be used to assess bone quality in patients with a fracture history.

Methods

Hip fracture patients requiring hemiarthroplasty were consented for analysis of their fractured femoral head. Baseline bone markers and vitamin D levels were taken along with drug history, type of fall and BMD.

Results

16 femoral head samples were analysed with microCT. Bone volume correlated with BMD of the opposite hip and spine (p=0.04 and p=0.012). Samples with higher levels of bone turnover had reduced trabecular number, trabecular thickness, and bone volume (p=0.053, 0.02 and 0.07 respectively). 7 samples were used for nanoindentation. Spine and hip BMD correlated with maximum modulus load (representation of the hardness and elasticity of the sample) with p=0.003 and 0.08 respectively. Patients with low vitamin D levels demonstrated reduced moduli (p=0.08).

Conclusion

Patients with higher bone turnover demonstrated alterations in bone microarchitecture not seen on DXA. Alterations in bone microarchitecture and bone material properties appear to have negative effects on the bone quality and may have predisposed these patients to their hip fracture.

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**THE CLOCK DRAWING TEST (CDT):
EFFECT OF EDUCATION ON
DIAGNOSTIC PERFORMANCE AND
CUTOFF SCORES FOR EARLY
DEMENTIA IN AN ASIAN POPULATION**

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Introduction

Although widely used across different cultures and languages, the influence of educational attainment on utility of the CDT in early dementia is unclear. We studied the effect of education on CDT diagnostic performance and cutoffs for detecting early dementia in an Asian population of varying education levels.

Methods

Cross-sectional study comprising subjects attending a memory clinic between January and December 2006. Comprehensive (16-point clock drawing, 16-point clock copying) and abbreviated (3-point clock drawing, Watson, Schulman) scoring protocols were used. Diagnostic performance and optimal cutoffs were determined using receiving operating characteristic curves, stratified by education level and compared with quoted cutoffs.

Results

13 cognitively intact and 55 early dementia (Clinical Dementia Rating 0.5 and 1.0) subjects were included. Dementia subjects were older (mean age 76.8 vs. 71.5 years) and less educated (4.7 vs. 10.3 years, all $P < 0.05$). Higher cut-offs were required compared to quoted cutoffs for comprehensive and abbreviated methods. Cutoffs differed between educational groups only for comprehensive methods. The CDT demonstrated best diagnostic performance in subjects with ≤ 6 years education (AUC comprehensive: 0.90-0.93; AUC abbreviated: 0.76-0.84). In subjects with > 6 years education, abbreviated protocols performed less well, particularly the Schulman's (AUC 0.63 for > 6 years education; AUC 0.84 for ≤ 6 years education).

Conclusion

Using appropriate education-adjusted cutoffs that are higher than original quoted cutoffs, the CDT demonstrates good diagnostic performance for detecting early dementia in our Asian population.

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**PARKINSON'S DISEASE CAREGIVING:
THE IMPACT OF CARER PERSONALITY
TRAITS ON CAREGIVER BURDEN**

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University of Southampton

Introduction

Caregiving is a multi-dimensional topic with increasing importance in our ageing population. This study concerns spousal caregivers of Parkinson's disease (PD) sufferers and investigates the relationships between carer personality traits and levels of dispositional optimism with resultant burden.

Methods

The study was of cross-sectional design involving 39 couples recruited from PD support groups in Hampshire. Regarding the care recipient, an assessment of disease severity and cognition were carried out using the Hoehn and Yahr tool and the Mini Mental State Examination (MMSE) respectively. Regarding the carer, caregiver burden was assessed using the caregiver strain index (CSI), personality traits using the NEO Five Factor Inventory (NEOFFI) and dispositional optimism using The Revised Life Orientation Test (LOT-R).

Results

Increasing disease severity led to increased caregiver strain, particularly from Hoehn and Yahr stages 3 to 4. With respect to traits, neuroticism was strongly linked to caregiver strain (Spearman's $CC = 0.604$, $p < 0.001$). Multiple regression analysis revealed that whilst disease severity was a strong predictor of caregiver burden, the traits of neuroticism and openness to experience accounted for 19.7% of the variance in CSI scores.

Conclusions

Spouses scoring highly on neuroticism are at increased risk of caregiver burden. The relative stability of personality traits means that they could be used as part of a screening tool at time of diagnosis to identify carers at higher risk of burden.

DETECTING POTENTIAL RESPIRATORY PATHOGENS IN THE MOUTHS OF OLDER PEOPLE ON ORTHOPAEDIC WARDS

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Introduction

The mouths of hospital in-patients are often colonised by bacteria which can cause hospital-acquired pneumonia (HAP) (Preston AJ et al. Gerontology 1999;45(1):49-52). It is hypothesised that HAP develops due to silent aspiration of bacteria. We wanted to find the best site within the mouth for detecting enterobacteriaceae, Pseudomonas and S. aureus.

Methods

Oral samples were taken from a convenience sample of 29 in-patients on orthopaedic wards at Newcastle General Hospital without cognitive impairment. Samples included an oral rinse, and swabs of supra-gingival plaque, denture plaque, tongue and throat taken at a single time-point. Plaque indices were recorded. Each sample was cultured on blood agar, CPS, and SAID (bioMerieux, Basingstoke, UK). The latter two plates selected for gram negative organisms and S. aureus respectively. Coliform bacteria were identified to species level (API20E, bioMerieux, Basingstoke, UK).

Results

The mean age of participants was 81.5 years (male n=5, female n=24). 13/29 (45%) patients grew a target organism from any site, of which 6/29 grew coliforms or Pseudomonas and 7/29 grew S. aureus only. Sensitivities were: oral rinse 92%, throat 62%, tongue 69%, tooth 56%, denture 54%, tongue and throat combined 77%. Higher plaque indices were not associated with presence of target bacteria (unpaired T test p=0.5).

Conclusions

The oral rinse was the most sensitive sampling method, however larger studies are needed to corroborate these results.

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