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Orthogeriatrics

Current Awareness Newsletter

June 2017
(Quarterly)

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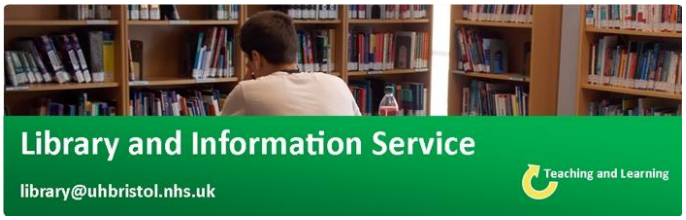

Training Sessions 2017

All sessions are one hour

June (12.00-13.00)

8th (Thurs) Interpreting Statistics
13th (Tues) Critical Appraisal
29th (Thurs) Literature Searching

July (13.00-14.00)

3rd (Mon) Interpreting Statistics
12th (Wed) Critical Appraisal
21st (Fri) Literature Searching
26th (Wed) Interpreting Statistics

August (12.00-13.00)

4th (Fri) Critical Appraisal
9th (Wed) Literature Searching
15th (Tues) Interpreting Statistics
24th (Thurs) Critical Appraisal

Your Local Librarian – Jo Hooper

Whatever your information needs, the library is here to help. As your outreach librarian I offer **literature searching services** as well as training and guidance in **searching the evidence** and **critical appraisal** – just email me at library @uhbristol.nhs.uk

OUTREACH: Your Outreach Librarian can help facilitate evidence-based practise, as well as assisting with academic study and research. We can help with **literature searching, obtaining journal articles and books**, and setting up individual **current awareness alerts**. We also offer one-to-one or small group training in **literature searching, accessing electronic journals, and critical appraisal**. Get in touch: library@uhbristol.nhs.uk

LITERATURE SEARCHING: We provide a literature searching service for any library member. For those embarking on their own research it is advisable to book some time with one of the librarians for a one-to-one session where we can guide you through the process of creating a well-focused literature research and introduce you to the health databases access via NHS Evidence. Please email requests to library@uhbristol.nhs.uk

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Updates

NICE National Institute for Health and Care Excellence

Predicting risk and outcomes for frail older adults: an umbrella review of frailty screening tools

Source: Joanna Briggs Institute - 01 April 2017

Comprehensive Geriatric Assessment for Prevention of Delirium After Hip Fracture: A Systematic Review of Randomized Controlled Trials

Source: PubMed - 13 April 2017 - Publisher: Journal Of The American Geriatrics Society
Read Summary

Treatment of Low Bone Density or Osteoporosis to Prevent Fractures in Men and Women: A Clinical Practice Guideline Update from the American College of Physicians

09 May 2017 - Publisher: Annals of Internal Medicine

Cochrane Library

No new relevant evidence

UpToDate®

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Geriatric trauma: Initial evaluation and management

- Musculoskeletal injuries of the pelvis, hip, and extremities
- Summary and recommendations

Falls in older persons: Risk factors and patient evaluation

- Epidemiology
- Risk factors
- Summary and recommendations

Hospital management of older adults

- Multidisciplinary team
- Summary and recommendations

Hip fractures in adults

- Radiographic findings
- Mechanism of injury
- Summary and recommendations

Overview of geriatric rehabilitation: Patient assessment and common indications for rehabilitation

- Hip fracture
- Summary and recommendations

UpToDate is the leading evidence-based clinical decision support system, designed for use at the point of care.

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- Adult and paediatric emergency medicine
- Allergy and immunology
- Cardiovascular medicine
- Dermatology
- Drug therapy
- Endocrinology and diabetes mellitus
- Family medicine
- Gastroenterology and hepatology
- General surgery
- Geriatrics
- Haematology
- Hospital Medicine
- Infectious diseases
- Nephrology and hypertension
- Neurology
- Obstetrics and gynaecology
- Oncology
- Paediatrics
- Primary care internal medicine
- Psychiatry
- Pulmonary, critical care and sleep medicine
- Rheumatology

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Current Awareness Database Articles related to Orthogeriatrics

Below is a selection of articles related to orthogeriatrics recently added to the healthcare databases, grouped in the following categories:

- **Medical**
- **Patient care and management**
- **Psychological**
- **Other**

If you would like any of the following articles in full text, or if you would like a more focused search on your own topic, then get in touch: library@uhbristol.nhs.uk

Medical

A retrospective cohort study of concomitant ipsilateral extra-capsular and intra-capsular fractures of the proximal femur. Are they casual findings or an undervalued reality?

Author(s): Videla-Ces M.; Sales-Perez J.-M.; Giros-Torres J.; Sanchez-Naves R.; Videla S.

Source: Injury; 2017

Publication Type(s): Article In Press

Abstract: Background: Fractures of the proximal femur constitute a major public health problem, with an annual incidence in Spain of 7.6 cases per 1000 inhabitants over 65 years of age. Hip fractures are frequent in elderly patients, related to osteoporosis and with low energy trauma, which means that they can be considered a geriatric syndrome. Simultaneous ipsilateral extra- and intra-articular hip fractures are considered as very rare are, and generally speaking, classified as extra- or intra-capsular fractures. Moreover, there is no consensus with regard to treatment of these concomitant fractures. Aim: To estimate the incidence of concomitant ipsilateral extra- and intra-capsular fractures of the proximal femur, and to describe the diagnostic process and the clinical characteristics of these concomitant fractures. Patients and methods: Retrospective cohort study of patients with hip fractures. The incidence of combined extra- and intra-capsular fractures was estimated, a confidence interval of 95% (95%CI) was calculated and a descriptive analysis was drawn up. Results: Between May 2010 (the date on which the Orthopaedic and Trauma Surgery Department of our new Hospital began the surgical activity) and December 2016, 33 (median age, 86 years-old) of the 2625 hip fractures were classified as simultaneous extra- and intra-capsular ipsilateral fractures. The overall cumulative incidence was of 1.3% (95%CI:0.9-1.8%). In 32 (97%) of the patients, the fracture was a consequence of a low energy trauma (ground level fall), while the remainder was due to a medium energy trauma (skating). In all cases the two fracture lines seem to be independent of each other, which suggests different mechanisms of injury from that of isolated subcapital or intrertrochanteric fracture. Conclusion: The incidence of concomitant ipsilateral extra- and intra-capsular fractures of the proximal femur must be taken into account in patients over 65 years of age. It is clinically relevant to identify these concomitant fractures in order to arrive at a correct diagnosis, which will facilitate preoperative planning and the choice of the best treatment to

achieve a better outcome.Misdiagnosis may cause further problems, such as fixation failures, disability and, in a worst case scenario, an increased risk of death. Therefore, a good and complete preoperative study is important, along with both good quality X-ray projections and 2D and 3D Ct-Scans in case of doubt.

Geriatric complex proximal humeral fracture: Intraoperative locking plate problems and proposed solutions

Author(s): Ayoub M.A.; Gad H.; El-Tantawy A.; Atef A.; Seleem O.A.

Source: Current Orthopaedic Practice; 2017; vol. 28 (no. 1); p. 70-78

Publication Type(s): Article

Abstract: Background: Surgical treatment of complex proximal humeral fractures in the elderly is controversial. There are no clear criteria on whether to preserve the humeral head or replace it. The aim of this study was to evaluate the results of locking-plate internal fixation and to clarify the encountered intraoperative problems with their suggested solutions. Methods: The study included 34 patients older than 60 yr of age. Eighteen had three-part fractures and 16 had four-part fractures according to Neer's classification. All patients had internal fixation with locking plates and according to the encountered problems additional procedures were added to obtain stable reduction and rigid fixation. The clinical evaluation depended on the objective Constant-Murley score (CMS) and the subjective Disabilities of the Arm, Shoulder and Hand (DASH) questionnaire. Results: The mean follow up was 27.7+/-5.6 mo, and the mean age was 69.9+/-4.4 yr. The mean CMS was 70.9+/-14.8 points, and the mean DASH score was 28.2+/-17.8 points. Humeral head avascular necrosis occurred in three (8.8%) with significant reduction in CMS (P=0.001). Partial loss of initial reduction occurred in four patients (11.8%) with significant reduction in CMS (P=0.007). Secondary surgery was mandatory for six patients (17.6%). Conclusions: We believe that locking plate osteosynthesis with preservation of the humeral head is worth considering in elderly patients with complex injuries provided the surgeon and facility are prepared for any problems that may arise.

Pelvic ring fractures in the elderly now and then - a pelvic registry study

Author(s): Rollmann M.F.; Herath S.C.; Kirchhoff F.; Braun B.J.; Holstein J.H.; Pohlemann T.; Histing T.; Menger M.D.

Source: Archives of Gerontology and Geriatrics; Jul 2017; vol. 71 ; p. 83-88

Publication Type(s): Article

Abstract: Objectives To analyze the changes in demographic data stratified for age, sex and type of injury of elderly patients suffering from pelvic ring fractures over a 22-year observation period. Design/Setting Data has been collected prospectively, multi-centrically in hospitals participating in the German Pelvic Trauma Registry. Patients We analyzed the data of 5665 patients with an age >=60 years included in the German Pelvic Trauma Registry from 1991 to 2013. Key results Over the 22-year study period the frequency of type A fractures decreased significantly from 84.8% to 43.9%, while type C and, in particular, type B fractures significantly increased from 7.0% and 8.2% to 14.3% and 41.8%. In patients between 60 and 70 years of age the frequency of type B and C fractures was higher compared to patients >70 years. The proportion of female patients, who represent the majority of the cohort (75%), was stable over the entire observation period. Interestingly, type A fractures were found more frequently in females, while type B and C fractures were found more frequently in males. Conclusions With the predicted demographic change and a shift toward more severe injury patterns (type B and C pelvic fractures) in the elderly population, trauma departments will need to develop specific surgical concepts for geriatric patients with pelvic ring fractures.

Are albumin levels a good predictor of mortality in elderly patients with neck of femur fractures?

Author(s): Harrison S.J.; Leeder D.J.; Sidhom S.A.; Messner J.; Stephenson J.

Source: Journal of Nutrition, Health and Aging; Jun 2017; vol. 21 (no. 6); p. 699-703

Publication Type(s): Article

Abstract: Background: Neck of femur (NOF) fractures are associated with significant morbidity and mortality in elderly people with multiple co-morbidities; making management of this patient subgroup challenging. Predictors of an increase in morbidity and mortality would therefore provide a useful framework for the assessment and management of this demographic. Within the current literature, hypoalbuminaemia (Copyright © 2017, Serdi and Springer-Verlag France.

Do clinical outcomes correlate with bone density after open reduction and internal fixation of tibial plateau fractures

Author(s): Gausden E.; Fabricant P.D.; Warner S.J.; Shaffer A.D.; Lorich D.G.; Garner M.R.

Source: Archives of Orthopaedic and Trauma Surgery; Jun 2017; vol. 137 (no. 6); p. 755-760

Publication Type(s): Article

Abstract: Introduction: The operative management of tibial plateau fractures in elderly patients has historically led to inconsistent results, and these clinical outcomes were thought to be associated with poor bone quality often in elderly patients. The goal of this study was to investigate the relationship between bone density and subjective clinical outcome scores after open reduction and internal fixation of tibial plateau fractures. Materials and methods: This is a retrospective cohort study from a single-surgeon conducted at an Academic, Level 1 Trauma Center. A preoperative computed tomography (CT) scan was obtained for all patients. Bone density of the distal femur was quantified with Hounsfield units (HU) as measured on axial CT scans. Inter-rater reliability of HU measurements was assessed using interclass correlation coefficients. Regression models controlling for age were used to identify relationships between bone density (HU) and the following variables: articular subsidence and 1-year subjective clinical outcomes scores [Knee Outcome Survey Activities of Daily Living Scale (KOS-ADLS), and Short-Form-36 (SF-36) physical and mental component scores (PCS, MCS)]. Results: Sixty-one patients with a mean age of 59.3 years (range 27-85 years) and a minimum of 12 months of clinical follow-up were included in the study. The majority of the fractures (32 of 61) were classified as Schatzker II tibial plateau fractures, and there were 13 Schatzker V fractures, 11 Schatzker VI fractures, 2 Schatzker IV fractures and 1 Schatzker 1 fracture. HU measurements demonstrated an almost perfect inter-observer reliability (ICC = 0.97). Age was negatively correlated with HU measurements (r = -0.51, p Copyright © 2017, Springer-Verlag Berlin Heidelberg.

Robotic assisted percutaneous pedicle screw fixation for thoracolumbar spine fractures

Author(s): Yashuv H.S.; Schroeder J.; Hasharoni A.; Kaplan L.; Barzilay Y.

Source: Global Spine Journal; May 2017; vol. 7 (no. 2)

Publication Type(s): Conference Abstract

Abstract: Introduction: Percutaneous fluoroscopy assisted pedicle screw fixation for thoracolumbar spine fractures is associated with preservation of posterior musculature, less blood loss, shorter operative time, lower infection risk, less postoperative pain, shorter rehabilitation time as well as shorter hospital stay when compared to open surgery, but with increased radiation exposure for the surgical team and patients. Robotic assisted spine surgery is an emerging field of surgery that has been shown to reduce radiation exposure with high level of safety. The purpose of this study is to evaluate the outcome of robotic assisted percutaneous pedicle screw fixation with for

thoracolumbar spine fractures. Material and Methods: A ambispective review of all patients with thoracolumbar fractures who were managed with robotic assisted percutaneous transpedicular screw fixation (Renaissance, Mazor roboticsl) at our medical center between November 2009 and July 2016. Demographic data, accuracy rates, post operative alignment, radiation exposure were evaluated. Results: Twenty two patients (14 males and 8 females) underwent robotic assisted percutaneous transpedicular screw fixation between November 2009 and July 2016 for type A and B (AO) thoracolumbar fractures. The average age was 41.1 years (range 17-82). Twelve cases were due to falls from height, 3 for MVA, 3 extension type injuries, and four from other mechanisims. Three of the patients were poly trauma patients, four had rib fractures and three others had calcaneous fractures as well. 154 screws were placed in total. Levels operated ranged from 3-7 levels, with 5 to 13 screws were used per case. In three cases cemented fenestrated screws were used. Mean total case radiation time per screw was 4.1 seconds (ranged 1.8-4.7 including registration, screw and rod placement). Only one screw was removed and inserted again manually (0.65%) because of malplacement. There were no treatment-related complications. There were no revision surgeries. Conclusion: Robotic assisted percutaneous pedicle screw fixation for thoracolumbar spine fractures is a safe method for screw placement for thoracolumbar trauma cases. It allows restoration of the sagittal alignment with satisfactory clinical results even for geriatric patients and poly trauma patients with reduced radiation to the patient and surgeon when compared to free hand techniques. The non fusion screw fixation allows removal of the screws if needed after healing has set. A comperative study with other navigation techniques is needed.

An economic case for the surgical treatment of type-II odontoid fractures in the elderly: A markov cost-utility analysis based on the prospective aospine geriatric odontoid fracture study

Author(s): Wilson J.; Fehilngs M.; Harrop J.; Schroeder G.; Vaccaro A.; Smith J.; Arnold P.

Source: Global Spine Journal; May 2017; vol. 7 (no. 2)

Publication Type(s): Conference Abstract

Abstract: Introduction: Type-II odontoid fractures are the most common cervical fractures encountered in the elderly, with an overall incidence that appears to be rising. Substantial uncertainty continues to surround optimal management of these injuries; while non-operative treatment is associated with a high rate of non-union, surgery is more costly and may be associated with high complication rates in this age group. To provide further evidence on this topic, we performed a value based assessment comparing costs and health gains between these treatment strategies. Material and Methods: We constructed a Markov cost-utility model, with a life-long time horizon, comparing quality-adjusted survival and costs of surgical vs. nonoperative treatment (external orthosis), from the perspective of the payer, for the base case of a 75 year-old person with a type-II odontoid fracture. Mean utility values, corresponding to the health states of interest, were calculated from primary data (SF-6D scores) prospectively collected during the AOSpine GOF Study. Probability rates for mortality, complications, failure/fusion were estimated based on a systematic review of the literature. Per patient treatment costs, presented in 2016 US dollars, were obtained from the Healthcare Cost and Utilization Project, National Inpatient Sample, averaged over a 7 year period (2003-2010). Incremental Cost Effectiveness Ratios (ICERs) were evaluated relative to a Willingness to Pay (WTP) threshold of 50,000USD/QALY. One- and two-way sensitivity analyses were performed to identify threshold values for age, cost, utility and probability values. Finally, probabilistic sensitivity analysis, using Monte Carlo Simulation with 1,000 sample iterations, was performed to generate ICER scatterplots and cost-effectiveness acceptability (CEA) curves. Results: Over a lifetime, as compared to non-operative treatment, surgery was associated with an average gain of an additional 0.81 QALYs and additional costs of 12,788USD, resulting in an ICER of 15,725USD/QALY for the base case analysis. With increasing age, surgery became less cost-effective, with age 96 representing the threshold beyond which the ICER exceeded the WTP threshold (ICER at age 85:26,069USD/QALY; ICER at age 95:46,049USD/QALY). Results were also found sensitive to

variation in year 1 post-op mortality rates, with surgery becoming less cost-effective as surgical mortality increased and as non-operative treatment morality decreased (Figure 1). Model results were less sensitive to variation in costs or fusion and complication rates for each strategy. Probabilistic sensitivity analysis revealed surgery to be the most cost-effective strategy in 79.3% of the 1000 iterations sampled, as depicted in the ICER scatterplot (Figure 2). Generation of CEA curve demonstrated surgery to the preferred strategy above a WTP threshold of 20,000USD. Conclusion: Surgical treatment for type-II odontoid fractures in the elderly appears to provide better value with respect to costs and health gains compared to nonoperative management with external orthosis. However, surgery becomes less cost effective with increasing patient age and increasing probability of early postop death. This implies that while surgery is likely to be the preferred approach for the younger healthier patient, conservative management may be more appropriate for the older patient with a higher probability of short-term mortality. Further studies are needed to confirm the findings presented here.

Patterns of drug prescriptions in an orthogeriatric ward as compared to orthopaedic ward: results from the Trondheim Hip Fracture Trial-a randomised clinical trial

Author(s): Heltne M.; Saltvedt I.; Prestmo A.; Sletvold O.; Lydersen S.; Spigset O.

Source: European Journal of Clinical Pharmacology; May 2017 ; p. 1-11

Publication Type(s): Article In Press

Abstract: Purpose: In the Trondheim Hip Fracture Trial, 397 home-dwelling patients with hip fractures were randomised to comprehensive geriatric care (CGC) in a geriatric ward or traditional orthopaedic care (OC). Patients in the CGC group had significantly better mobility and function 4 months after discharge. This study explores group differences in drug prescribing and possible associations with the outcomes in the main study. Methods: Drugs prescribed at admission and discharge were registered from hospital records. Mobility, function, fear of falling and quality of life were assessed using specific rating scales. Linear regression was used to analyse association between drug changes and outcomes at 4 months. Results: The mean age was 83 years, and 74% were females. The mean number (+/- SD) of drugs in the CGC and OC groups was 3.8 (2.8) and 3.9 (2.8) at inclusion and 7.1 (2.8) and 6.2 (3.0) at discharge, respectively (p = 0.003). The total number of withdrawals was 209 and 82 in the CGC and OC groups, respectively (p

Determining generalizability of STRIDE (Strategy for Reduction of Postoperative Delirium in Elderly Patients) geriatric anesthesia RCT

Author(s): Leonard H.; Sieber F.; Oh E.

Source: Journal of the American Geriatrics Society; May 2017; vol. 65

Publication Type(s): Conference Abstract

Abstract: Background STRIDE is a randomized control trial (RCT) determining whether the incidence of postoperative delirium differed between hip fracture patients >=65 yrs receiving light vs deep propofol spinal anesthesia. We compared baseline Charlson comorbidities and its Index (CCI) in trial eligible vs. ineligible subjects in order to determine if the eligibility criteria were too restrictive to generalize trial results to all hip fracture patients >=65 yrs1. Methods Post IRB approval, each ineligible subject's CCI related comorbidities, age corrected CCI, ASA status and ineligibility rationale were determined by chart review. Ineligible subjects were stratified by age (>=65 vs =65 ineligible group was older (84+/-8 vs 81+/-8 yrs; M+/-SD; p=0.004), had a higher CCI (6.8+/-2.4 vs 5.4+/-2.1; p=65 yrs had a higher burden of comorbidities as determined by CCI (Table). Therefore, caution must be exercised when generalizing STRIDE results to hip fracture patients >=65 yrs. (Table Presented).

What is the most accurate way to measure orthostatic vital signs?

Author(s): Jamison S.; Blehm R.; Miura L.N.

Source: Journal of the American Geriatrics Society; May 2017; vol. 65

Publication Type(s): Conference Abstract

Abstract: Background: An estimated 30% of adults >75 years have orthostatic hypotension, defined as a drop in systolic blood pressure of 20 mmHg or more or a drop in diastolic blood pressure of 10 mmHg or more. Orthostatic hypotension is associated with significant morbidity, such as falls, fractures, TIAs, syncope and MI. The CDC suggests measuring orthostatic vital signs in the supine position, followed by standing after 1 minute, then 3 minutes; however we are commonly taught to measure them supine, seated, then standing. The literature is mixed and there are no studies behind the supine/seated/standing version. Our Fall Assessment Clinic (FAC) started in 2013 to serve Veterans in need of a comprehensive falls assessment by a geriatrician and physical therapist. We aimed to evaluate which method of measuring orthostatics is more sensitive to detect orthostatic hypotension. Methods: Patients referred to the FAC had their orthostatic vital signs checked using 2 methods: 1) after 5 minutes supine, then after 1 minute sitting, then 1 minute standing; and 2) after 5 minutes supine, then after 1 minute standing, then 3 minutes standing. 33 Veterans seen in FAC in 2016, who signed our informed consent had their de-identified data entered into a repository for analysis. Results: The average patient age was 76.7 years, 87.9% male, and 81.8% Caucasian. This group averaged 19 falls/year at the initial visit; 5 had >25 falls/year. 66.7% were independent in 6/6 basic ADLs, 36.4% for 8/8 instrumental ADLs. 84.8% lived in a private home. The average prescription medication total was 16.1. The average number of comorbidities was 7.2. 45.5% met the criteria for positive orthostatics. 66.7% of those were orthostatic in more than one position change. 40.0% were positive with both methods. 26.7% were positive using the supine/sitting/standing method and 26.7% were positive using the supine/standing/standing method. Conclusions: The Veterans referred to our FAC have a high disease burden and multiple factors contributing to their fall risk, including orthostatic hypotension. These preliminary results suggest that measuring orthostatics with only one method has rather low sensitivity. More research is needed to find the most sensitive and practical method to check orthostatic vital signs.

Geriatric shoulder pain: Importance of early diagnosis in maintaining functional independence

Author(s): Lott K.; Rackman A.S.; Olson J.

Source: Journal of the American Geriatrics Society; May 2017; vol. 65

Publication Type(s): Conference Abstract

Abstract:BACKGROUND: Shoulder pain is a common complaint in geriatric practice. The case described below depicts an atypical presentation of geriatric shoulder pain, and illustrates potential consequences of delayed diagnosis and treatment. CASE PRESENTATION: 79 year old male presented to the ED following an episode of hypotension and weakness, with new onset left arm swelling and shoulder pain. He reportedly awoke with these symptoms. No trauma, fevers, chills or any prior injury. Medical history included coronary artery disease, atrial fibrillation, normocytic anemia, gout, chronic kidney disease, and recent diagnosis of follicular lymphoma, H. Pylori, and latent TB at recent hospital admission. Exam revealed tenderness to palpation at the left deltoid muscle and the humeral head near AC joint, without palpable abnormalities. Patient was unable to flex or abduct left shoulder beyond 90 degrees. Unable to easily perform empty can testing. Neck, elbow and hand ROM otherwise intact. Edema and warmth noted at left forearm and hand, without erythema. Labs: CRP 176.9, Uric Acid 6.6, WBC 9.57, H/H 7.7/ 25.1, BUN/Cre 23/1.84, Alb 2.9. Doppler left upper extremity negative for DVT. X-ray of left arm at prior admission showing lytic lesions of proximal humeral diaphysis. MRI of left shoulder obtained 3 days after admission showing "partial articular surface tear of supraspinatus muscle, mild tendinosis of subscapularis tendon, biceps tendinopathy,

effusion, and lymphomatous infiltration of proximal left humerus corresponding to lytic lesions" visualized on prior x-ray. RESULTS: Pt treated conservatively with rest, physical therapy, and acetaminophen for partial rotator cuff tear, thought to be unrelated to lytic lesion in left humerus. However, delay in evaluation by orthopedic and oncologic specialties. Pt unfortunately suffered fall during hospitalization, further injuring left arm. Subsequent imaging showed "acute comminuted fracture through proximal humeral diaphysis at site of pathologic lesion", requiring surgical fixation, radiation treatment and prolonged subacute rehab stay. DISCUSSION:This particular case illustrates the multiple etiologies for shoulder pain and emphasizes the importance of multi-disciplinary team evaluations as part of the diagnosis so that treatments/precautions can be quickly taken to avoid further decline in functional status.

Foot drop in dementia: Crossing the bridge to diagnosis and treatment

Author(s): Murdock C.; Blackstone K.; Kaiser R.; Cobbs E.L.

Source: Journal of the American Geriatrics Society; May 2017; vol. 65

Publication Type(s): Conference Abstract

Abstract: Background: Foot drop in the geriatric patient, whether due to serious or benign underlying disease, may lead to serious disability from complications such as falls and immobility. Although foot drop may be difficult to identify in people with geriatric syndromes (ex. dementia, frailty, gait disorders), a comprehensive functional assessment can lead to early identification. Prompt foot drop identification and treatment of the underlying cause may improve gait, mobility and quality of life. Case: A 90 year old man with advanced dementia and hypertension presented to the geriatrics clinic for evaluation of a gait abnormality. One week earlier his assisted living facility (ALF) supervisor referred him to an emergency department where leg, ankle and foot X-rays revealed no fracture and laboratory studies (blood counts, chemistries, uric acid) were normal. Family described his inability to bear weight on his right leg for two weeks, with especially difficult transfers from their car. There was no history of trauma or falls. He walked into the exam room with a high stepping gait of the right leg, seated himself into the chair, and crossed his legs at the knees. He was comfortable appearing, oriented only to self, and unable to follow directions during the examination. Cranial Nerve testing was normal (II-XII). He was unable to dorsiflex the right foot. He had no leg edema, erythema, atrophy, fasciculation or tenderness. Reflexes were normal. There was no pain with passive range of motion of the right ankle. Sensation testing was unreliable. He was prescribed an anklefoot orthotic and a course of oral steroids for suspected peroneal nerve impingement, and ALF staff reminded him to uncross his legs when seated. At follow-up three weeks later his foot drop was resolved. Conclusion: Foot drop, a symptom of sometimes serious underlying disease with impact on gait and mobility, can be difficult to identify in people with geriatric syndromes such as dementia, frailty, and gait disorders. A comprehensive geriatric assessment, including a function review, can lead to recognition of foot drop, expedite evaluation and treatment, and avoid or limit mobidity of complications. We will review the pathophysiology of peroneal nerve impingement and other causes of foot drop and treatments.

An unusual presentation of hyponatremia in an elderly patient M. Singh, G. M. Sullivan. University of Connecticut, Farmington, CT

Author(s): Singh M.; Sullivan G.M.

Source: Journal of the American Geriatrics Society; May 2017; vol. 65

Publication Type(s): Conference Abstract

Abstract: Background: Hyponatremia is the most common electrolyte disorder found in older adults, especially in women and patients taking thiazide diuretics. The prevalence is 3-4% in hospitalized patients overall and this increases with age. The geriatric population is especially likely to develop

mental status changes with hyponatremia. Case: A 94 year old woman with history of hypertension presented to clinic, from home, with complaints of nausea for the past few weeks. Her family also reported intermittent episodes of vomiting, confusion, dizziness and lethargy. In clinic the patient denied any dizziness, confusion, headache, seizures, constipation, or diarrhea. She was recently treated for bilateral humeral fractures after a fall. Her medications included atorvastatin, lisinopril, HCTZ, ASA, and alendronate. On physical examination she was oriented to person, place and time without any neurological deficits. Initial lab tests showed a serum sodium of 109 mmol/L. She was admitted to intensive care. Further testing showed serum osmolality 233 mOsm/kg, urine osmolality 405 mOsm/kg, urine sodium 54 mEq/L and urine specific gravity1.015. Her serum sodium level 4 months before admission was 137 mmol/L. She was diagnosed with euvolemic hyponatremia secondary to HCTZ but syndrome of inappropriate antidiuretic hormone (SIADH) was also considered to be one of the contributing factor due to her trauma. HCTZ was stopped and she received hypertonic saline. The patient experienced no neurological complications and was discharged on day 7 with a serum sodium of 133 mEq/L. Discussion: This patient presented non-specifically with nausea and vomiting small amounts as her main symptoms. Trauma, such as fracture, is associated with SIADH yet her use of HCTZ complicated the picture. Chronic hyponatremia patients can present with stable vital signs and no specific physical findings. The risk factors predisposing to thiazide-induced hyponatremia are old age, female gender, reduced body mass and use of other medications that impair water excretion. The tendency towards sodium depletion, observed in healthy elderly and due to changes in tubular handling of sodium, contributes to their increased risk of hyponatremia. Multifactorial etiologies are common. In elderly outpatients, identification of risk factors and awareness of non-specific presentation are imperative for detection of hyponatremia in older persons.

The importance of a thorough neurological exam in a patient with frequent unexplained falls

Author(s): Cummings K.; Nicastri C.

Source: Journal of the American Geriatrics Society; May 2017; vol. 65

Publication Type(s): Conference Abstract

Abstract: Progressive supranuclear palsy (PSP) is characterized by gait instability, frontal cognitive disturbance and vertical gaze palsy. Although uncommon, PSP remains important to recognize early to prevent further complications from falls. A 77-year-old woman presented to Geriatric Clinic for evaluation of frequent falls. Her symptoms began five months prior resulting in three falls significant enough to require hospitalization for head trauma, rib and vertebral fractures. The falls were often related to positional change, such as bending over to tie her shoes. Neurological exam revealed slowed speech, upward gaze palsy, masked facies, and unsteady gait. She had no deficits on mini-mental status exam. Laboratory studies were unremarkable, CT head showed no acute intracranial findings and cardiac evaluation was negative. A home care agency was contacted to provide nursing and physical therapy. She was referred for urgent neurological consult and MRI brain. Over the ensuing three months she was hospitalized again for fall related injuries, including vertebral, pubic ramus and clavicular fractures, as well as subarachnoid hemorrhage. Once again the work-up did not elucidate the etiology of her falls. Due to these hospitalizations she missed several outpatient neurology appointments and inpatient neurology was not consulted despite the Geriatrician's request. Nine months after initial onset of falls the patient was finally evaluated by a neurologist. Exam revealed flattened affect, vertical gaze paresis, axial rigidity, bradykinesia and postural-gait instability, consistent with a clinical diagnosis of progressive supranuclear palsy. The patient was counseled on the diagnosis, etiology and natural course of the disease. Three months following the diagnosis she has not had any additional falls or hospitalizations. This case illustrates the importance of performing a thorough neurological exam in patients with frequent falls. As PSP is a clinical diagnosis, a good history and physical exam can lessen the burden and cost of unnecessary labs or

imaging. Although there are no pharmacological treatments for PSP, early diagnosis is crucial to provide functional interventions and prevent further falls. A multidisciplinary team approach, including speech pathologists to manage dysphagia, occupational and physical therapy to promote independence in ADLs and provide gait and balance training, is essential to caring for patients with PSP.

Dilemma of surgical interventions for hip fractures in elderly demented patients: Preliminary analysis of qualitative data

Author(s): Baker A.; McCurdy S.; Knudson P.; Saraykar S.; Ambrose C.G.; Rianon N.

Source: Journal of the American Geriatrics Society; May 2017; vol. 65

Publication Type(s): Conference Abstract

Abstract: Elderly demented patients with fragility hip fractures are at risk for poor long-term outcomes with or without surgical intervention, and surgical decision making for these patients can be challenging. There are no specific criteria or guidelines for decision-making regarding surgical intervention for fragility hip fractures in older demented patients, but patients treated with collaborative efforts from geriatricians and orthopedic teams have been reported to have improved functional outcomes. To develop guidelines for inter-professional surgical decision making in elderly demented patients, we conducted in-depth face-to-face or phone interviews with orthopedic surgeons and medicine specialists from hospitalist and geriatrics groups. We recruited participants through flyers sent to the medical and surgical providers of two different major medical schools in the Texas Medical Center. We interviewed 3 hospitalists, 3 geriatricians and 9 orthopedic surgeons who provide care for geriatric patients with dementia and hip fractures. Each clinician was asked to provide a few points for and against surgical intervention in the case of an elderly demented patient with a fragility hip fracture. We used thematic content analysis to code their responses and group them into themes. The main themes identified were: Quality of life (QOL) (including emphasis on mobility, functional status, pain and overall QOL), cognition (mention of dementia or patient's ability to comply with rehabilitation), medical reasons (including comorbidities, poor bone quality [osteoporosis] and adverse health outcomes if surgery is not done), surgical risks, fracture characteristics, and social history (including patients' support system or predefined advanced directives). QOL was a dominant concern across interviews. Cognition was emphasized by all geriatricians while medical and surgical issues were emphasized by surgeons. Both geriatricians and surgeons were more likely to mention social history compared to the hospitalists. These themes, as well as different trends in their emphasis between specialties, may direct a future questionnaire to investigate how the inter-professional team may decide for or against surgical intervention for fragility hip fractures in older demented patients.

The association between sarcopenia and functional outcomes among older patients with hip fracture undergoing in-hospital rehabilitation

Author(s): Landi F.; Calvani R.; Ortolani E.; Salini S.; Martone A.M.; Sisto A.; Picca A.; Marzetti E.; Santoro L.; Santoliquido A.

Source: Osteoporosis International; May 2017; vol. 28 (no. 5); p. 1569-1576

Publication Date: May 2017

Publication Type(s): Article

Abstract: Summary: This study evaluates the prevalence of sarcopenia among older people admitted to a rehabilitation unit after hip fracture and the association between sarcopenia and functional outcomes. The results show that sarcopenia had a negative impact on functional recovery. The assessment of sarcopenia among older adults receiving rehabilitation programs is crucial.

Introduction: Sarcopenia is a highly prevalent geriatric syndrome associated with adverse outcomes, including falls, disability, institutionalization, and mortality. Few studies assessed sarcopenia among older adults receiving rehabilitation programs. Methods: Patients aged 70 years or more consecutively admitted to in-hospital rehabilitation programs that had suffered from hip fracture entered the study. Sarcopenia was defined according to the Foundation for National Institutes of Health (FNIH) criteria. Multivariable linear regression models were used to analyze the association between the sarcopenia and functional recovery. Results: The recruited population was composed of 127 patients, with a mean age of 81.3 +/- 4.8 years, predominantly females (64.6%). Using the criteria proposed by the FNIH, patients with a diagnosis of sarcopenia were 43 (33.9%). After adjustment for potential confounders, participants with sarcopenia had a significant increased risk of incomplete functional recovery compared with non-sarcopenic patients (OR 3.07, 95% CI 1.07-8.75). Compared with participants without sarcopenia, those with sarcopenia showed lower Barthel index scores at the time of discharge from the rehabilitation unit (69.2 versus 58.9, respectively; $p < 0.001$) and after 3 months of follow-up (90.9 versus 80.5, respectively; $p = 0.02$). Conclusions: These findings support the systematic assessment of sarcopenia among older adults receiving rehabilitation programs to assist in the development of personalized treatment plans aimed at improving functional outcomes.

The impact of hemocoagulase for improvement of coagulation and reduction of bleeding in fracture-related hip hemiarthroplasty geriatric patients: A prospective, single-blinded, randomized, controlled study

Author(s): Qiu M.; Zhang X.; Cai H.; Xu Z.; Lin H.

Source: Injury; Apr 2017; vol. 48 (no. 4); p. 914-919

Publication Type(s): Article

Abstract: Background Uncontrolled bleeding is associated with poor outcomes and mortality in geriatric patients undergoing hemiarthroplasty. Hemocoagulase agkistrodon is a hemocoagulative, anti-hemorrhagic enzyme complex from Deinagkistrodon acutus snake venom. This study aimed to investigate the efficacy of hemocoagulase agkistrodon on coagulation and bleeding outcomes in fracture-related hemiarthroplasty. Patients and methods This was a prospective, single-blinded, randomized controlled trial carried out between October 2013 and September 2014 in 96 geriatric patients undergoing hemiarthroplasty for unilateral femoral neck fracture. Patients were administrated hemocoagulase agkistrodon (n = 48) or normal saline (n = 48). Intraoperative blood loss, transfusion volume and rate, and drainage were assessed. Hemoglobin (Hb) and coagulation parameters (prothrombin time [PT], thrombin time [TT], plasma fibrinogen [FIB], and activated partial thromboplastin time [aPTT]) were recorded preoperatively and 30 min and 1, 3, and 5 days after surgery. Complications were followed up for 4 weeks. Results Compared to controls, hemocoagulase patients exhibited lower intraoperative blood loss ($P < 0.01$) and postoperative blood loss, total drainage, mean transfusion volume, and transfusion rates (all $P < 0.05$), with lower aPTT at 30 min ($P < 0.05$). No significant differences in postoperative FIB were observed. Controls exhibited significantly higher PP and TT on day 1, and Hb on days 1, 3, and 5 ($P < 0.05$). No serious complications were reported. Conclusions Hemocoagulase reduced blood loss and transfusion in fracture-related hip hemiarthroplasty without increasing short-term adverse event rates. In geriatric populations, hemocoagulase could be used for limiting bleeding and related complications. Trial registration: This trial is registered in the Chinese Clinical Trial Register (no. ChiCTR-TRC-14004379)

Internal fixation of acetabular fractures in an older population using the TIMI approach - Midterm results of a prospective study

Author(s): Aigner R.; Hellige R.; Knippel S.; Oberkircher L.; Ruchholtz S.; Buecking B.

Source: Injury; Apr 2017; vol. 48 (no. 4); p. 890-896

Publication Type(s): Article

Abstract: Introduction The incidence of geriatric acetabular fractures continues to increase due to demographic changes. In the elderly, anterior column fractures are common, and standard approaches are associated with a considerable risk for surgery-associated complications. Therefore, a minimally invasive approach was developed in our department. The aim of this study was to examine early and mid-term results regarding the use of this novel two-incision minimally invasive (TIMI) approach in patients aged over 55 years with acetabular fractures. Methods From July 2007 to April 2014, 47 patients aged over 55 years were treated via the TIMI approach; these patients were included in the present prospective study. The patients' characteristics, data, and early phase of care were assessed during acute care. A radiological evaluation comprised pre- and postoperative CT scans and x-rays, including Judet views at follow-up. Follow-up examinations were performed after 6 and 24 months and comprised a clinical and radiological examination and an evaluation of hip function (Harris Hip Score) and health-related quality of life (EQ-5D). Results The mean age of the patients was 74 +/- 11 years, with a gender ratio of 35/12 (m/f). The average operation time was 93 +/- 30 min, and perioperative blood loss amounted to 858 +/- 463 ml. In total, five (11%) complications associated with the operative procedure occurred, and revision surgery was necessary in three patients. We observed no wound infections, abdominal wall hernias or cases of heterotopic ossification in our sample. The Harris Hip Score at six months after surgery was 81, and it slightly improved to 84 after 24 months. The mean EQ5D index was 0.91 at six months after surgery and 0.92 at 24 months after surgery. Conclusion The TIMI approach represents a valuable alternative to the ilioinguinal and modified Stoppa approach for the treatment of acetabular fractures located in the anterior column, which are often observed in geriatric patients. Level of evidence Therapeutic Level II (Prospective cohort study).

Patient care and management

Low borderline levels of serum vitamin B12 may predict cognitive decline in elderly hip fracture patients

Author(s): Mizrahi E.H.; Lubart E.; Leibovitz A.

Source: Israel Medical Association Journal; 2017; vol. 19 (no. 5); p. 305-308

Publication Type(s): Article

Abstract: Background: The progression from cognitive impairment to dementia is a multifactorial process that involves genetic and environmental factors. Vitamin B12 deficiency can be an important factor in the progress from cognitive decline to dementia. Objectives: To examine the relationship between borderline low level of vitamin B12 (

Clinical practice guidelines decrease unnecessary echocardiograms before hip fracture surgery

Author(s): Adair C.; Swart E.; Seymour R.; Patt J.; Karunakar M.A.

Source: Journal of Bone and Joint Surgery - American Volume; 2017; vol. 99 (no. 8); p. 676-680

Publication Type(s): Review

Available in full text at Journal of Bone and Joint Surgery - American Volume - from Ovid

Abstract: Background: Preoperative assessment of geriatric patients with a hip fracture may include transthoracic echocardiography (TTE), which increases resource utilization and cost and may delay surgery. The purpose of this study was to evaluate preoperative TTE utilization at a single institution in order to determine (1) how often TTE is ordered in accordance with clinical practice guidelines (CPGs), (2) how frequently TTE reveals cardiac disease that may alter medical or anesthesia management, and (3) whether following CPGs reduces unnecessary TTE utilization without potentially missing important disease. Methods: A retrospective review of data on 100 geriatric patients with a hip fracture who had undergone preoperative TTE was performed. Charts were reviewed to evaluate if TTE had been obtained in accordance with the published CPGs from the American College of Cardiology/American Heart Association (ACC/AHA). TTE reports were reviewed for the presence of disease that was important enough to cause modifications in anesthesia or perioperative management, including new left ventricular systolic or diastolic dysfunction, moderate or severe valvular disease, and pulmonary hypertension. Finally, the sensitivity and specificity of accordance with the ACC/AHA CPGs for predicting which patients would have TTE that identified important disease were calculated. Results: The TTE was ordered in accordance with the published ACC/AHA CPGs for 66% of the patients. TTE revealed disease with the potential to modify anesthesia or medical management in 14% of the patients-for all of whom the TTE had been indicated according to ACC/AHA guidelines (i.e., the guidelines were 100% sensitive). In this study population, following the ACC/AHA guidelines could have prevented the performance of TTE in 34% of the patients without missing any disease (40% specificity). Conclusions: Preoperative TTE for patients with a hip fracture is frequently obtained outside the recommendations of established CPGs. Utilization of CPGs such as the ACC/AHA guidelines should be considered, as it may decrease variability in care and reduce unnecessary resource utilization without adversely affecting patient outcomes.

Orthogeriatric Combined Management of Elderly Patients With Proximal Femoral Fracture: Results of a 1-Year Follow-Up

Author(s): Forch S.; Haufe T.; Plath J.; Mayr E.; Kretschmer R.

Source: Geriatric Orthopaedic Surgery and Rehabilitation; 2017; vol. 8 (no. 2); p. 109-114

Publication Type(s): Article

Abstract: Introduction: According to the expected demographical changes, the number of elderly trauma patients will increase exponentially over the next decades. Different models of an interdisciplinary orthogeriatric care have been developed. But there is only limited evaluation of their benefit without clear and evidence-based results. In 2011, we monitored the results of our orthogeriatric combined management by conducting a 1-year follow-up. Methods: We treated 231 patients presenting a proximal femoral fracture on our orthogeriatric ward. We obtained the epidemiological data and the geriatric assessments from all these patients. One year after discharge, we sent them a written questionnaire. Primary end points were the mortality and the functional outcome, measured by Barthel score, the requirement of care, and the residential status. Results: One hundred sixty-seven (72%) of the 231 patients completed the follow-up. The average age at admission was 81.5 years (70-99 years). The mortality rate was 2.4% during hospital stay and 31.4% after 1 year. The average Barthel score was 44 points at the time of admission, 55 points at discharge, and 72 points after 1 year. Forty-five percent of the patients were in requirement of care at the time of their admission. At the 1-year follow-up, 63% of the patients had some form of care, thus showing an increase of 18%. At the moment of the fracture, 77% of the patients were living in their own home and 23% in a nursing home. After 1 year, the surviving patients show nearly unchanged conditions (75% own home vs 25% nursing home). Eighty-six percent of the patients

coming from their own home were able to continue living there independently. Conclusion: The orthogeriatric care is successful in reducing the short-time mortality without showing any effect on 1-year mortality. But the surviving patients seem to benefit from an improved functional outcome.

Comparison of 3 Different Perioperative Care Models for Patients With Hip Fractures Within 1 Health Service

Author(s): Coventry L.S.; Nguyen A.; Roshan-Zamir S.; Tran P.; Karahalios A.

Source: Geriatric Orthopaedic Surgery and Rehabilitation; 2017; vol. 8 (no. 2); p. 87-93

Publication Type(s): Article

Abstract: Introduction: Orthogeriatric care models have been introduced within many health-care facilities to improve outcomes for hip fracture patients. This study aims to evaluate differences in care between 3 models, an orthopedic model, a geriatric model, and a comanaged model. Materials and Methods: A retrospective analysis was conducted for hip fracture patients treated at Western Health between November 2012 and March 2014. All patients aged 65 years or older were included in the analysis. Results: There were 183 patients in the orthopedic model, 137 in the geriatric model, and 126 in the comanaged model. Demographics and clinical characteristics were similar across the 3 models. Length of stay, mortality, and discharge destination were also consistent across the 3 groups. However, groups involving geriatricians were more likely to receive preoperative medical assessments, have greater recognition of postoperative medical problems, and have implementation of long-term osteoporosis management. Conclusion: The involvement of geriatricians in perioperative care models resulted in more comprehensive medical care without impacting length of stay, mortality, or discharge destination.

Using Care Bundles to Improve Surgical Outcomes and Reduce Variation in Care for Fragility Hip Fracture Patients

Author(s): Bandara S.; Cooke C.; Ward N.; Lynch G.; Varghese P.

Source: Geriatric Orthopaedic Surgery and Rehabilitation; 2017; vol. 8 (no. 2); p. 104-108

Publication Type(s): Article

Abstract: Introduction: Fragility hip fractures constitute a large proportion of orthogeriatric admissions to orthopedic wards. This study looked at reducing variation in care in fragility hip fracture patients using a novel approach with care bundles. The care bundle comprises 5 elements targeted at providing adequate analgesia, early mobilization, improving recognition of delirium, and decreasing rates of urinary infections. Methods: A total of 198 patients who sustained a fragility hip fracture during the intervention period were included in the study. The primary outcome measure was compliance in applying the bundle to the study population, and secondary outcome measures were in-hospital mortality, acute length of stay, delirium and duration of delirium, and urinary tract infections. Results: During the 12-month intervention period, compliance to the bundle of care was 47% (n = 92) based on the "all-or-none" approach. This was 28% higher than the preintervention rate. Overall, there was an increased rate of compliance across all individual elements of the bundle in the intervention group when compared to the preintervention group (P =.01). The most significant clinical result was a 10.5% reduction in "in-hospital mortality" in the intervention group (P

A comparison of treatment setting for elderly patients with hip fracture, is the geriatric ward superior to conventional orthopedic hospitalization?

Author(s): Frenkel Rutenberg T.; Heller S.; Velkes S.; Daglan E.

Source: Injury; 2017

Publication Type(s): Article In Press

Abstract: Introduction: Hip fractures in the elderly are a major cause of morbidity and mortality. The treatment settings of these patients may change their outcomes. The aim of this study is to compare the outcomes of patients with displaced femoral neck fractures who were admitted to the orthopedic vs. geriatric wards. Patients and methods: A retrospective study was conducted on 217 consecutive older patients with 219 displaced femoral neck fractures admitted either to the orthopedic or the geriatric ward between Jan. 2013 and Jun. 2015. Information regarding demographic, medical history, surgical management, hospitalization, and one year readmissions and mortality data was retrieved from electronic charts. Results: 102 hemiarthroplasty patients were admitted to the orthopedic ward and 117 to the geriatric ward. Patients' characteristics, including age, living arrangements, mobility status and the Charlson Comorbidity Index were similar between groups. Patients from the orthopedic ward had shorter hospitalization time (9. +/-. 5.1 vs. 10.8. +/-. 6.7. days, p = 0.022) and presented a lower in-hospital complication rates (0.6. +/-. 0.96 vs. 1. +/-. 1.9, p = 0.022), namely fewer events of urinary retentions, urinary tract infections and pneumonias (8.8% vs. 23.9%, p = 0.004, 3.9% vs. 14.5%, p = 0.010 and 2.9% vs. 12.2%, p = 0.034, respectfully). Readmission rates were similar. Neither in hospital nor one year mortality rates differed between groups. Conclusions: Our study found that geriatric care was not superior to orthopedic directed management in the treatment of elderly patients with hip fractures in terms of in-hospital complications, and hospitalization times.Copyright © 2017.

Emergency Department Pain Management Following Implementation of a Geriatric Hip Fracture Program

Author(s): Casey S.D.; Stevenson D.E.; Mumma B.E.; Tyler K.; Slee C.; Wolinsky P.R.; Hirsch C.H.

Source: Western Journal of Emergency Medicine; Jun 2017; vol. 18 (no. 4); p. 585-591

Publication Type(s): Article

Available in full text at Western Journal of Emergency Medicine - from National Library of Medicine

Abstract: Introduction: Over 300,000 patients in the United States sustain low-trauma fragility hip fractures annually. Multidisciplinary geriatric fracture programs (GFP) including early, multimodal pain management reduce morbidity and mortality. Our overall goal was to determine the effects of a GFP on the emergency department (ED) pain management of geriatric fragility hip fractures. Methods: We performed a retrospective study including patients age >=65 years with fragility hip fractures two years before and two years after the implementation of the GFP. Outcomes were time to (any) first analgesic, use of acetaminophen and fascia iliaca compartment block (FICB) in the ED, and amount of opioid medication administered in the first 24 hours. We used permutation tests to evaluate differences in ED pain management following GFP implementation. Results: We studied 131 patients in the pre-GFP period and 177 patients in the post-GFP period. In the post-GFP period, more patients received FICB (6% vs. 60%; difference 54%, 95% confidence interval [CI] 45-63%; pCopyright © 2017 Tyler et al.

Continuous femoral nerve catheters decrease opioid-related side effects and increase home disposition rates among geriatric hip fracture patients

Author(s): Arsoy D.; Gardner M.J.; Amanatullah D.F.; Huddleston J.I.; Goodman S.B.; Maloney W.J.; Bishop J.A.

Source: Journal of Orthopaedic Trauma; Jun 2017; vol. 31 (no. 6)

Publication Type(s): Article

Abstract: Objective: To evaluate the effect of continuous femoral nerve catheter (CFNC) for postoperative pain control in geriatric proximal femur fractures compared with standard analgesia (SA) treatment. Design: Retrospective comparative study. Setting: Academic Level 1 trauma center. Patients/Participants: We retrospectively identified 265 consecutive geriatric hip fracture patients who underwent surgical treatment. Intervention: One hundred forty-nine patients were treated with standard analgesia without nerve catheter whereas 116 patients received an indwelling CFNC. Main Outcome Measurement: Daily average preoperative and postoperative pain scores, daily morphine equivalent consumption, opioid-related side effects and discharge disposition. Results: Patients with CFNC patients reported lower average pain scores preoperatively (1.9 +/- 1.7 for CFNC vs. 4.7 +/- 2 for SA; P

A multidisciplinary approach to improve the quality of care for patients with fragility fractures

Author(s): Lamb L.C.; Montgomery S.C.; Harder S.; Meter J.; Feeney J.M.; Wong Won B.

Source: Journal of Orthopaedics; Jun 2017; vol. 14 (no. 2); p. 247-251

Publication Type(s): Article

Abstract: Background Fragility fractures have become a worldwide epidemic associated with significant morbidity and mortality. As the world population ages, the number of patients that experience these fractures is also expected to rise. A multidisciplinary team was assembled that was coordinated by the Acute Inpatient Medical Service and included orthopedic surgeons, geriatricians, anesthesiologists, cardiologists, nurses, trauma surgeons, emergency medicine physicians, physiatrists, and physical therapists. This team was formed with the expectation that geriatric fragility fracture complications, specifically hip fractures, could be reduced by identifying and implementing best practices using guidelines from the American Academy of Orthopedic Surgery and those from the International Geriatric Fracture Society. Methods We implemented a clinical pathway with a standardized approach with reduction in care variation and followed that by instituting performance improvement measures. The difference in outcome measurements as reported by TQIP for the year prior to implementation and the year following creation of the fragility fracture program was evaluated. Results Benchmarking data demonstrated improved outcomes for patients with fragility fractures. Length of stay was significantly below national average, mortality remained below national average, and complication rates for UTIs and pressure ulcers were both reduced from 2014 to 2015 and below the national average. Conclusion The clinical pathway we adopted for the care of patients with fragility fractures has resulted in reduced lengths of stay, below average mortality, and improved discharge disposition.

Evaluation of the virtual ace intervention for geriatric care dissemination

Author(s): Biswal S.; Simmons E.; Kennedy K.; Vickers J.; Malone E.; Kennedy R.; Reiff D.; Morris M.; Booth K.; Flood K.

Source: Journal of the American Geriatrics Society; May 2017; vol. 65

Publication Type(s): Conference Abstract

Abstract: Background: Hospitalized elders are at risk for hospital-acquired disability and delirium. The Acute Care for Elders (ACE) model has demonstrated improvement in these outcomes. Despite this, logistical challenges hinder hospitals' development of ACE Units, necessitating an intervention to disseminate ACE care to non-ACE units, a care delivery redesign we term the Virtual ACE (V-ACE) Intervention. Methods: We present a quasi-experimental evaluation of the V-ACE Intervention on 6 non-ACE Units (2 orthopedic surgery, 2 trauma surgery, 1 GI surgery, 1 GI medicine) at UAB Hospital. The intervention includes training staff from all disciplines in the performance of geriatric screens for

baseline and current ADL performance (Katz Index), cognition (Six Item Screen; SIS), and delirium (Nursing Delirium Screening Scale; NUDESC). V-ACE also hardwires care protocols for safe mobility and delirium prevention based on geriatric screens. Process outcome measures were pre-versus post-V-ACE completion of geriatric screens. Clinical outcome measures included patient mobility (as measured by response to query of time spent in chair and walking in a prior 24-hour period) and delirium prevalence in the subgroup of patients present on the unit at time of research assistant (RA) availability. Results: Analysis included 367 patients pre-and 651 patients post-V-ACE. There was no difference in mean age (73 years), race, Katz Index scores, or proportion of patients with a fall in the prior 3 months in pre-vs post-V-ACE patients. Completion of geriatric screens significantly improved (p<.05) for all screens: both a baseline and current Katz Index (38% vs 60%), SIS (84% vs 89%), and NUDESC (47% vs 89%) completed in patients pre-versus post-V-ACE. Delirium prevalence was significantly reduced (11% vs 6%, p<.05) post-V-ACE. In the subsample of patients who were independent in all ADLs prior to hospitalization, significantly more patients got into a chair (48% vs 67%, p<.05), walked in the hall (26% vs 42%, p<.05), and walked off the unit (1% vs 7%, p<.05) in the 24-hour period prior to RA assessment. Conclusions: Implementing ACE Unit care processes on non-ACE Units is feasible and appears to improve mobility and cognition outcomes without requiring a geriatrician to prompt this daily care. This unit-based care delivery redesign may represent an innovative model for improving elder care hospital-wide.

Changes in nutritional status and associated factors in a geriatric post-hip fracture assessment

Author(s): Helminen H.; Luukkaala T.; Saarnio J.; Nuotio M.S.

Source: European Geriatric Medicine; Apr 2017; vol. 8 (no. 2); p. 134-139

Publication Date: Apr 2017

Publication Type(s): Article

Abstract: Aim To examine changes in nutritional status and to identify factors associated with poor nutritional status in a comprehensive geriatric assessment after hip fracture. Methods Nutritional status according to the Mini Nutritional Assessment Short Form (MNA-SF) was assessed in 585 hip fracture patients aged 65 years and over at baseline and six months postoperatively at our geriatric outpatient clinic. Poor nutritional status was defined as being malnourished or at risk of malnutrition according to the MNA-SF. Logistic regression analyses were used. Results At baseline, 39%, and at follow-up, 59% of patients had poor nutritional status. After adjusting for age, higher age, American Society of Anesthesiologists (ASA)-grade 3, taking 4-10 medications, prefracture diagnosis of memory disorder, non-independent mobility, not living in own home and poor nutritional status at baseline were prognostic factors for poor nutritional status. In the geriatric assessment, MMSE < 24, difficulties in basic activities of daily living, depressive mood, longer time on Timed Up and Go (TUG) and weakened grip strength were associated with poor nutritional status. In multivariate analyses, prefracture memory disorder, MNA-SF at baseline and depressive mood, TUG and grip strength in the outpatient assessment continued to be associated with poor nutritional status at follow-up. Conclusions Cognition and mood require attention in the nutritional care of hip fracture patients. The strong association of poor nutritional status with impaired mobility and grip strength implies an association between protein-energy malnutrition and sarcopenia. Both muscle strength and nutrition need to be addressed in comprehensive hip fracture care and rehabilitation.

Complications during hospitalization and risk factors in elderly patients with hip fracture following integrated orthogeriatric treatment

Author(s): Folbert E.C.; Hegeman J.H.; Velde D.; Gierveld R.; van Netten J.J.; Ten Duis H.J.; Slaets J.P.

Source: Archives of Orthopaedic and Trauma Surgery; Apr 2017; vol. 137 (no. 4); p. 507-515

Publication Type(s): Article

Abstract: Introduction: This study aimed to evaluate the incidence of complications in elderly patients with a hip fracture following integrated orthogeriatric treatment. To discover factors that might be adjusted, in order to improve outcome in those patients, we examined the association between baseline patient characteristics and a complicated course. Methods: We included patients aged 70 years and older with a hip fracture, who were treated at the Centre for Geriatric Traumatology (CvGT) at Ziekenhuisgroep Twente (ZGT) Almelo, the Netherlands between April 2011 and October 2013. Data registration was carried out using the clinical pathways of the CvGT database. Based on the American Society of Anesthesiologists (ASA) score, patients were divided into high-risk (HR, ASA 3 >=, n = 341) and low-risk (LR, ASA 1-2, n = 111) groups and compared on their recovery. Multivariate logistic regression was used to identify risk factors for a complicated course. Results: The analysis demonstrated that 49.6% (n = 224) of the patients experienced a complicated course with an in-hospital mortality rate of 3.8% (n = 17). In 57.5% (n = 196) of the HR patients, a complicated course was seen compared to 25.2% (n = 28) of the LR patients. The most common complications in both groups were the occurrence of delirium (HR 25.8% vs. LR 8.1%, p =3 (OR 3.62, 95% CI 2.22-5.91, p

Effects of preoperative chronic hypoxemia on geriatrics outcomes after hip arthroplasty

Author(s): Zhang F.; Zhang R.; He L.; Yin J.; Wang F.; Li J.

Source: Medicine (United States); Apr 2017; vol. 96 (no. 15)

Publication Type(s): Article

Abstract: The partial pressure of oxygen decreases as altitude increases, the preoperative chronic hypoxemia (CH) may have a plausible clinical impact. Risk factors for postoperative serious adverse events (pSAEs) in patients living in high altitudes during primary hip arthroplasty (HA) are not clear. This is an observational study embracing patients from January 1, 2011 to December 31, 2015 at Yan'an Hospital of Kunming City, a 1338-bed municipal teaching hospital of Kunming Medical University. Univariate analysis revealed that significant differences between patients with and without preoperative CH occurred in intraoperative hypotension (77 [33%] vs 34 [47%], P = .040) and that significant differences between patients with and without pSAEs occurred in following variables: preoperative CH (32 [57%] vs 199 [80%], P < .001), intraoperative hypotension (37 [66%] vs 74 [30%], P < .001), highest noradrenaline support (.09 [.01-.21] vs.03 [.01-.05] mug/kg/min, P < .001), higher application of general anesthesia (15 [27%] vs 29 [12%], P = .004), and lower of combined-spinal epidural anesthesia (CSEA) (21 [37%] vs 165 [66%], P < .001). The general anesthesia and intraoperative hypotension remained the independent risk factors for pSAEs (P < .05), while the preoperative CH presented by decreasing its risk (P < .05). This study suggests that various intraoperative events including general anesthesia, hypotension were risk factors for the development of pSAEs. Preoperative CH, presenting with decreased incidence of intensive care unit (ICU) admission and pSAEs, may mimic hypoxic preconditioning in organic protection, for which further study is needed to uncover the underlying mechanisms.

Age-dependent risk factors for malnutrition in traumatology and orthopedic patients

Author(s): Lambert C.; Biesalski H.K.; Nussler A.; Freude T.; Bahrs C.; Ochs G.; Flesch I.; Stockle U.; Ihle C.

Source: Nutrition; May 2017; vol. 37 ; p. 60-67

Publication Type(s): Article

Abstract: Objective The aim of this study was to investigate the prevalence of risk of malnutrition (RoM) in an orthopedic and traumatology patient cohort with a broad range of ages. In addition to

the classical indicators for risk assessment (low body mass index, weight loss, and comorbidity), this study aimed to analyze the effects of lifestyle factors (eating pattern, smoking, physical activity) on RoM. Methods The prospective cohort study included 1053 patients in a level 1 trauma center in Germany. RoM was assessed by Nutritional Risk Screening (NRS) 2002 and for the elderly additionally by Mini Nutritional Assessment (MNA). Age-dependent risk factors identified in univariate statistical analysis were used for multivariate logistic regression models. Results The prevalence of patients at RoM (NRS >=3) was 22%. In the three age categories (=70 y), loss of appetite, weight loss, number of comorbidities, drugs and gastrointestinal symptoms significantly increased RoM in univariate statistical analysis. In patients ages >=70 y, several disease- and lifestyle-related factors (not living at home, less frequent consumption of vegetables and whole meal bread, low physical activity, and smoking) were associated with RoM. Multivariate logistic regression model for the total study population identified weight loss (odds ratio [OR], 6.09; 95% confidence interval [CI], 4.14-8.83), loss of appetite (OR, 3.81; 95% CI, 2.52-5.78), age-specific low BMI (OR, 1.87; 95% CI, 1.18-2.97), number of drugs taken (OR, 1.19; 95% CI, 1.12-1.26), age (OR, 1.03; 95% CI, 1.02-1.04), and days per week with vegetable consumption (OR, 0.938; 95% CI, 0.89-0.99) as risk factors. Conclusion Malnutrition in trauma and orthopedic patients is not only a problem related to age. Lifestyle-related factors also contribute significantly to malnutrition in geriatric patients.

EULAR/EFORT recommendations for management of patients older than 50 years with a fragility fracture and prevention of subsequent fractures.

Author(s): Lems, W F; Dreinhöfer, K E; Bischoff-Ferrari, H; Blauth, M; Czerwinski, E; da Silva, Jap; Herrera, A; Hoffmeyer, P; Kvien, T; Maalouf, G; Marsh, D; Puget, J; Puhl, W; Poor, G; Rasch, L; Roux, C; Schüler, S; Seriolo, B; Tarantino, U; van Geel, T; Woolf, A; Wyers, C; Geusens, P

Source: Annals of the rheumatic diseases; May 2017; vol. 76 (no. 5); p. 802-810

Publication Date: May 2017

Publication Type(s): Practice Guideline Journal Article Consensus Development Conference Review

Available in full text at EULAR Meeting Abstracts - from Highwire Press

Available in full text at Annals of the Rheumatic Diseases - from Highwire Press

Abstract: The European League Against Rheumatism (EULAR) and the European Federation of National Associations of Orthopaedics and Traumatology (EFORT) have recognised the importance of optimal acute care for the patients aged 50 years and over with a recent fragility fracture and the prevention of subsequent fractures in high-risk patients, which can be facilitated by close collaboration between orthopaedic surgeons and rheumatologists or other metabolic bone experts. Therefore, the aim was to establish for the first time collaborative recommendations for these patients. According to the EULAR standard operating procedures for the elaboration and implementation of evidence-based recommendations, 7 rheumatologists, a geriatrician and 10 orthopaedic surgeons met twice under the leadership of 2 convenors, a senior advisor, a clinical epidemiologist and 3 research fellows. After defining the content and procedures of the task force, 10 research questions were formulated, a comprehensive and systematic literature search was performed and the results were presented to the entire committee. 10 recommendations were formulated based on evidence from the literature and after discussion and consensus building in the group. The recommendations included appropriate medical and surgical perioperative care, which requires, especially in the elderly, a multidisciplinary approach including orthogeriatric care. A coordinator should setup a process for the systematic investigations for future fracture risk in all elderly patients with a recent fracture. High-risk patients should have appropriate non-pharmacological and pharmacological treatment to decrease the risk of subsequent fracture.

Proactive geriatric consultation for elderly orthopedic patients reduces mortality and length of stay

Author(s): Cialic R.; Tellem R.; Lerman Y.; Barak O.; Berliner-Senderey A.; Meilik A.; Snir N.

Source: Journal of the American Geriatrics Society; May 2017; vol. 65

Publication Type(s): Conference Abstract

Abstract:BACKGROUND: Traumatic injuries and osteoarthritis are leading causes for functional deterioration, morbidity and mortality in the older population. Following orthopedic interventions, older patients are susceptible to various medical complications-wound and systemic infections, VTE, delirium, pressure sores, and exacerbation of chronic medical conditions. Delayed identification and treatment of these complications may increase length of stay, morbidity and mortality and increases the risk for functional deterioration and unwanted institutionalization. Geriatricians are trained to perform early identification and treatment of these complications as well as to direct a multidimensional discharge plans. In the current study we made an adjustment to the standard care of older patients by employing a proactive geriatric consultation. Geriatricians served as an integral part of a multidisciplinary team providing care for older patients in the orthopedic division. The geriatricians conducted early post-operative evaluation and continued follow-up in selected patients. DESIGN: Retrospective single center cohort study. SETTING: Orthopedic division of a large tertiary academic hospital. METHODS: Retrospective data was collected for the years 2011-2015. (The intervention took place between 01.2015 and 31.12.2015). Time from operation to geriatric consultation, post-operative length of stay in the orthopedic division and perioperative mortality were compared for patients during the intervention period (n=736) and previous years (n=5786). RESULTS: Time from operation to geriatric consultation decreased (93 hours to 67 hours median time, P <0.01). Post-operative length of stay decreased (6.8 days to 5.9 days, P value <0.01). During intervention year mortality rate was reduced significantly (38 to 34 yearly death rate, P<0.001). CONCLUSIONS: Integrating geriatricians into the multidisciplinary orthopedic team and applying a proactive geriatric approach led to reduced length of stay and mortality.

Enrichissement alimentaire apres fracture osteoporotique au cours d'une rehabilitation en soins de suite et readaptation orthogeriatrique : interet nutritionnel et/ou fonctionnel ?

Dietary enrichment after osteoporotic fracture during hospitalization in orthogeriatric rehabilitation care unit: Nutritional and functional interest?

Author(s): Raimbault F.; Schonheit C.; Curtis V.; Sczepanek D.; Meziere A.; Loustau M.

Source: Nutrition Clinique et Metabolisme; May 2017; vol. 31 (no. 2); p. 151-161

Publication Type(s): Article

Abstract: Materials and methods The study was retrospective, controlled, randomized, and was conducted from June 15, 2015 to July 31, 2016 in the orthogeriatric rehabilitation care unit of the Charles-Foix Hospital (Assistance publique-Hopitaux de Paris). The population named group A benefiting from dietary enrichment in addition to traditional high protein hospital food was compared with a group B benefiting only from the high protein traditional hospital food. The comparison concerned the variation in weight, body mass index, albuminemia, length of stay, walking perimeter, autonomy and destination after hospitalization. Results In total, 144 patients (mean age 86 years; females 84%) were included, with 79 people in group A and 65 in group B. All patients lost weight: -2.08 kg in group A and -0.30 kg in group B (P = 0.02). All patients improved albuminemia level with +3.84 g/L in group A and +2.73 g/L in group B, without significant difference. The recovery of walking and autonomy, and destination after hospitalization were comparable in both groups. The length of hospital stay in group A was shorter than in group B, with respectively 43 +/- 23 days and 52 +/- 33 days (P = 0.04). Conclusion Dietary enrichment in elderly patients after fracture in orthogeriatric rehabilitation care unit allowed a decrease of the length of hospital stay,

but does not improve nutritional and functional status.

Effects of an interprofessional geriatric medical service on outcomes in older adults with hip fractures

Author(s): Springer S.; Cassidy E.; Wilhelmy K.; D'Amico F.; Sakely H.

Source: Journal of the American Geriatrics Society; May 2017; vol. 65

Publication Type(s): Conference Abstract

Abstract: Background: Hip fractures result in excess mortality, cost, and loss of independence in older adults. Studies have shown significant differences in length of hospital stay (LOHS) with geriatric teams, however, limited data exists for the inclusion of a geriatric pharmacist. Our Geriatric Medicine Service (GMS) is an interprofessional team of, geriatricians, geriatric pharmacists, and physician and pharmacy residents. The primary objective was to assess LOHS in geriatric hip fracture patients admitted to the GMS compared to those treated by non-GMS teams. The secondary objectives were to assess the impact of the GMS on rates of complications (venous thromboembolism [VTE] or delirium); 30-day readmission rate; and rates of appropriate post hip fracture osteoporosis treatment (calcium, vitamin D and bisphosphonates). Methods: A retrospective chart review was conducted of patients 65 years or older presenting to the hospital with a hip fracture between January 2013 and September 2015. Patients were excluded if they experienced in-hospital hip fractures, were admitted under observation, or did not have a surgical intervention. GMS patients were case-matched to non-GMS patients in a 1 to 3 ratio. Both parametric and non-parametric statistical tests were utilized. All analyses were performed using SAS software. Results: A total of 188 patients were included, 88 and 100 patients on the GMS and non-GMS team, respectively. Age was the only significantly different baseline parameter between groups (85.3 years vs 82.6 years in the GMS and non-GMS group, respectively; p = 0.022) No significant difference was seen between LOHS (p=0.52; 95% CI [-2.38-1.2]), VTE (p=0.55), or 30-day readmission (p=0.07). Documentation of delirium was significantly greater in the GMS group (30.7% vs. 18.0%, p=0.04). There were significant differences between rates of prescribing calcium (73.9% vs. 26%, p<0.001), vitamin D (89.8% vs. 47.0%, p<0.001), and bisphosphonates (25.0% vs. 5.0%, p<0.001) in the GMS and non-GMS patients, respectively. Conclusion: The GMS had more appropriate post-hip fracture medications on discharge. This study may indicate that inclusion of a geriatric pharmacist may improve appropriate prescribing on discharge in older adults with hip fractures. The GMS team did not improve LOS, rates of complication, or delirium.

Psychological

AIDE-Acute Illness and Depression in Elderly Patients. Cognitive Behavioral Group Psychotherapy in Geriatric Patients With Comorbid Depression: A Randomized, Controlled Trial

Author(s): Hummel J.; Weisbrod C.; Boesch L.; Himpler K.; Hauer K.; Gaebel A.; Zieschang T.; Fickelscherer A.; Dutzi I.; Oster P.; Hautzinger M.; Diener S.; Krumm B.; Kopf D.

Source: Journal of the American Medical Directors Association; Apr 2017; vol. 18 (no. 4); p. 341-349

Publication Type(s): Article Abstract:Background Comorbid depression is highly prevalent in geriatric patients and associated with functional loss, frequent hospital re-admissions, and a higher mortality rate. Cognitive behavioral psychotherapy (CBT) has shown to be effective in older depressive patients living in the community. To date, CBT has not been applied to older patients with acute physical illness and comorbid depression. Objectives To evaluate the effectiveness of CBT in depressed geriatric patients, hospitalized for acute somatic illness. Design Randomized controlled trial with waiting list control group. Setting Postdischarge intervention in a geriatric day clinic;

follow-up evaluations at the patients' homes. Participants A total of 155 randomized patients, hospitalized for acute somatic illness, aged 82 +/- 6 years and suffering from depression [Hospital Anxiety and Depression Scale (HADS) scores >7]. Exclusion criteria were dementia, delirium, and terminal state of medical illness. Intervention Fifteen, weekly group sessions based on a CBT manual. Commencement of psychotherapy immediately after discharge in the intervention group and a 4-month waiting list interval with usual care in the control group. Measurements HADS depression total score after 4 months. Secondary endpoints were functional, cognitive, psychosocial and physical status, resource utilization, caregiver burden, and amount of contact with physician. Results The intervention group improved significantly in depression scores (HADS baseline 18.8; after 4 months 11.4), whereas the control group deteriorated (HADS baseline 18.1; after 4 months 21.6). Significant improvement in the intervention group, but not in the control group, was observed for most secondary outcome parameters such as the Barthel and Karnofsky indexes. Intervention effects were less pronounced in patients with cognitive impairment or acute fractures. Conclusions CBT is feasible and highly effective in geriatric patients. The benefits extend beyond effective recovery and include improvement in physical and functional parameters. Early diagnosis, good access to psychotherapy, and early intervention could improve care for depressive older patients. Clinical Trial Registration www.germanctr.de German Trial Register DRKS 00004728

Traumatic falls in the elderly: A collaborative model between geriatric & trauma services

Author(s): Carcia D.; Harris T.; Collins S.; Ritter A.Z.; Graham D.; Dementovych N.

Source: Journal of the American Geriatrics Society; May 2017; vol. 65

Publication Type(s): Conference Abstract

Abstract:88 year old male with hypertension, diabetes mellitus and atrial fibrillation for which he was taking anticoagulation presented to the ER after a fall at home. The cause of the fall was unknown. He was alert and oriented, but could not recall the events of the fall. He was found to have an occipital fracture, orbital wall fracture, subarachnoid hemorrhage, and subdural hematoma without mass effect or midline shift. He received Vitamin K for Coumadin reversal and was hospitalized on the trauma service. Four days into his hospitalization he was evaluated by the geriatric team and there was note of a subtle change in mental status from his previous condition. He was sent for a CT which showed worsening of his subdural hematoma, increasing edema and mass effect. He was immediately transferred to the ICU. Subsequently, the patient's condition continued to deteriorate and he was placed on hospice. He died as a result of the fall and intracranial hemorrhage which in this population can be difficult to manage or prevent. In the case of our patient, his subtle neurologic changes were picked up initially by the geriatric team. There is a growing body of evidence to suggest that the incorporation of a geriatric team in elderly patients after trauma improves outcomes, specifically related to falls in the anticoagulated patient, including a decrease in delirium, readmission rates, functional decline, and discharge to long term care facilities. In our hospital, the collaborative nature of care between trauma and geriatrics has been beneficial to our patients. There are multiple fall risk assessment tools available without consensus in guidelines. Specifically, the timing for implementation of such tools is often after the first fall, thereby not assisting in primary prevention. The American Geriatrics Society recommends a comprehensive screening and assessment inclusive of history of falls, medication review and gait and balance demonstration to help decrease each individuals likelihood of falls or other traumatic events. In caring for our elderly patients with a history of atrial fibrillation, much consideration needs to be placed on the decision to anticoagulate or not. It is critical to consider the risk and benefits of fall vs stroke potential for each individual. It can be helpful to involve geriatric focused care prior to traumas to help decrease the incidence of future events.

Impact of the holocaust on the rehabilitation outcome of older patients sustaining a hip fracture

Author(s): Mizrahi E.H.; Lubart E.; Leibovitz A.; Heymann A.

Source: Israel Medical Association Journal; Apr 2017; vol. 19 (no. 4); p. 207-210

Publication Type(s): Article

Available in full text at Israel Medical Association Journal - from EBSCOhost

Abstract: Background: Holocaust survivors report a much higher prevalence of osteoporosis and fracture in the hip joint compared to those who were not Holocaust survivors. Objectives: To evaluate whether being a Holocaust survivor could affect the functional outcome of hip fracture in patients 64 years of age and older undergoing rehabilitation. Methods: A retrospective cohort study compromising 140 consecutive hip fracture patients was conducted in a geriatric and rehabilitation department of a university-affiliated hospital. Being a Holocaust survivor was based on registry data. Functional outcome was assessed by the Functional Independence MeasureTM (FIM) at admission and discharge from the rehabilitation ward. Data were analyzed by t-test, chi-square test, and linear regression analysis. Results: Total and motor FIM scores at admission (P = 0.004 and P = 0.006, respectively) and total and motor FIM gain scores at discharge (P = 0.008 and P = 0.004 respectively) were significantly higher in non-Holocaust survivors compared with Holocaust survivors. A linear regression analysis showed that being a Holocaust survivor was predictive of lower total FIM scores at discharge (beta = -0.17, P = 0.004). Conclusion: Hip fracture in Holocaust survivors showed lower total, motor FIM and gain scores at discharge compared to nonHolocaust survivor patients. These results suggest that being a Holocaust survivor could adversely affect the rehabilitation outcome following fracture of the hip and internal fixation.

Hyponatremia and functional loss during hospitalization: Are we missing the key condiment for a proper physical performance?

Author(s): Gallego E.; Valades M.; Oreja S.; Soria S.; Garcia-Cardenas V.; Omonte J.; Vidan-Astiz M.; Ortiz J.; Serra-Rexach J.

Source: Journal of the American Geriatrics Society; May 2017; vol. 65

Publication Date: May 2017

Publication Type(s): Conference Abstract

Abstract: Background: Influence of hyponatremia on elderly falls and fractures has been highlined, but its role on elderly functional impairment is not well established. Our objective is to evaluate functional trajectories of elderly hospitalized patients and their relationship with hyponatremia at admission Methods: Prospective cohort of patients admitted to the Acute Geriatrics Unit and discharged alive Sociodemographic, functional characteristics (activities of daily living-ADLs-and ambulation at baseline, at admission and at discharge) and relevant clinical data were collected: multimorbidity (Charlson's index score >3 points), severity of acute disease (APACHE II score>15), dementia diagnosis (if DSMIV criteria were met), delirium, and serum albumin (<3.5g/dl) and sodium at admission. Pre-hospital and in-hospital functional trajectories were set. Bivariate and multivariate analysis were performed to evaluate hyponatremia relationship with functional decline. Results: 903 patients were recruited between April 2009 and May 2011. Average age was 87+/-6yr, 60% were women. 49% had dementia, 37% developed delirium, 33% were seriously ill at admission, 27% had multiple comorbidities, 47% had low serum albumin and 27 % had hyponatremia. 54% and 28% of patients needed some help for walk (at least others' supervision) or perform at least one of the ADLs at baseline. Most of the functional decline happened before admission, but almost 10 % of patients suffered further loss during hospitalization. Hyponatremia was more common among those who suffered pre-hospital gait and in-hospital ADLs impairment. When other risk factors for functional loss were taken into account, only relationship between hyponatremia and in-hospital ADLs

impairment remained significant (p<.05). Conclusions: In elderly patients, hyponatremia at admission predicts loss of independence in ADLs during hospitalization, regardless their baseline status, severity of disease, ocurrence of delirium and comorbidities (including dementia). More research is needed to understand the underlying mechanisms of sodium homeostasis influence on physical performance of older adults, and to explore if treatment efforts should focus on correcting hyponatremia or priorizing physical therapies for hyponatremic patients.

Post-operative delirium in a cohort of elective surgical oncogeriatric patients: Is it still a neglected issue?

Author(s): Prefumo M.; Camia L.; Monacelli F.

Source: European Journal of Clinical Investigation; May 2017; vol. 47 ; p. 135

Publication Type(s): Conference Abstract

Abstract: Introduction and aim: Post-operative delirium (POD) is a prevalent geriatric issue, especially in the geriatric wards, along with neurological and orthopedics wards; however, it is widely neglected in routine clinical practice, leading to poorer clinical outcomes. The present study was aimed at assessing the incident rate of POD and the correlation analysis of associated predisposing risk factors in a cohort of older adults, eligible for elective surgical intervention for solid gastro enteric tumors. Subjects and methods: 90 consecutive subjects were enrolled, after obtained written informed consent. The mean age was of 80.26 +/- 0.65 years; female:68 and male:12. The rapid assessment test for delirium (4AT) was performed after 48 h to assess POD. Each patient underwent the Comprehensive Geriatric Assessment (CGA) and frailty assessment with Rockwood Frailty Index (FI). CGA was aimed to assess cognitive status, functional status, comorbidity, depression, malnutrition, risk of falls and pain. The following clinical assessments were also performed: ECOG-PS, Dindo-Clavien, ASA and TUG-test to assess physical performance. Results: 4AT:3.61 +/- 0.25 mean score; MMSE:27.12 +/- 0.37; CIRS:4.53 +/- 0.19; CDT:2.56 +/- 0.16; Barthel:97.56 +/- 0.70; Tinetti: 24.09 +/- 0.61; MNA:28.52 +/- 4.17; ECOG-PS:0.37 +/- 0.24; BI: 97.23 +/- 0.85; GDS:3.62 +/- 0.32; CGA:3.61 +/- 0.25; TUG:11.13 +/- 0.63; Rockwood-FI:0.24 +/- 0.01; ASA:2.30 +/- 0.08; Dindo-Clavien: 0.88 +/- 0.16; NRS:0.65 +/- 0.19. The incident rate of POD for elective surgical patients was 21.11%. The results showed the following significant correlations with 4AT test: Age: $P < 0.005$. TUG: $P < 0.0003$. CGA: $P < 0.0001$. Barthel: $P < 0.0007$. MMSE: $P < 0.0001$. CDT: $P < 0.002$. Tinetti: $P < 0.007$. ASA classification did not predict POD. Discussion: The study showed the high incidence of POD in elective surgical oncogeriatric patients. There is a significant correlation between delirium incidence and impaired CGA, age, cognitive status, functional status and the impaired performance physical assessment. Even if preliminary, the results originally confirmed that POD is a highly incident geriatric syndrome. The accurate analysis of in hospital precipitating factors and associated clinical outcomes (one-month mortality, overall mortality, functional status, cognitive dysfunction) in such a vulnerable population will help understanding the predictive role of delirium in the oncogeriatric surgical setting.

Effectiveness of parenteral nutritional supplementation in elderly patients with hip fracture

Author(s): Giannotti C.; Pizzonia M.; Odetti P.

Source: European Journal of Clinical Investigation; May 2017; vol. 47 ; p. 135

Publication Type(s): Conference Abstract

Abstract: About 60% of older patients, hospitalized for hip fracture, are malnourished at hospital admission. Trauma and surgical stress induce a catabolic state that negatively affects muscle mass and strength, resulting in reduced rehabilitation capacity. Currently, several studies based on oral nutritional supplementation led to contrasting results in terms of effects on muscle mass or functional recovery, and they do not provide clear recommendations. The aim of the study is to

evaluate if a parenteral nutritional intervention produces significant changes on some biochemical markers of nutritional status, reducing as well the incidence of post-operative complications in hip fractured patients. The prospective observational study includes 92 hip fractured patients over 75 years old, admitted from March to August 2016 at the Department of Orthopedics and Traumatology of San Martino Hospital of Genova, Italy. The mean age is 86,6 +/- 5,9 years and the 80% are female. At the time of admission (T0), all patients undergo abbreviated comprehensive geriatric assessment and blood sampling for the assay of the three nutritional status biomarkers (albumin, transferrin and lymphocytes). The intervention group consists of 40 patients: mean age is 87 +/- 6+/-18 years with 75% of malnourished or at risk of malnutrition. The intervention consists of a three-compartmental parenteral nutrition (volume 1000 mL; 700 kcal), infused during the first five postoperative days, compared to control group (52 patients), only on standard diet (meanKcal1100). After seven postoperative days (T7), all patients undergo blood control of the nutritional markers and the postoperative complications were recorded before discharge. By comparing the changes of the three nutritional markers (T7-T0), albumin presents a significant decrease ($P < 0.001$) in both groups. Lymphocyte count increases with an increase of 23% in the intervention group ($P < 0.001$) compared to an increase of 8.7% in the control group. Patients in the intervention group have fewer fracture-related complications than patients in the control group. In particular delirium shows statistical significance (incidence of 27.5% vs 50%; $P < 0.0339$ chiQuadroTest) suggesting that intravenous nutrition may play a role in reducing the risk of developing postoperative delirium.

Improving hip fracture outcomes with integrated orthogeriatric care: A comparison between two accepted orthogeriatric models

Author(s): Middleton M.; Wan B.; Da Assuncao R.

Source: Age and Ageing; May 2017; vol. 46 (no. 3); p. 465-470

Publication Type(s): Article

Abstract: Background: our orthopaedic trauma unit serves a large elderly population, admitting 400-500 hip fractures annually. A higher than expected mortality was detected amongst these patients, prompting a change in the hip fracture pathway. The aim of this study was to assess the impact of a change in orthogeriatric provision on hip fracture outcomes and care quality indicators. Patients and Methods: the hip fracture pathway was changed from a geriatric consultation service to a completely integrated service on a dedicated orthogeriatric ward. A total of 1,894 consecutive patients with hip fractures treated in the 2 years before and after this intervention were analysed. Results: despite an increase in case complexity, the intervention resulted in a significant reduction in mean length of stay from 27.5 to 21 days (P

Other

Costs after hip fracture in independently living patients: a randomised comparison of three rehabilitation modalities.

Author(s): Lahtinen, A.; Leppilahti, J.; Vähänikkilä, H.; Harmainen, S.; Koistinen, P.; Rissanen, P.; Jalovaara, P.

Source: Clinical Rehabilitation; May 2017; vol. 31 (no. 5); p. 672-685

Publication Type(s): Academic Journal

Abstract: Objective: To evaluate costs and cost-effectiveness of physical and geriatric rehabilitation after hip fracture. Design: Prospective randomised study (mean age 78 years, 105 male, 433 female) in different rehabilitation settings: physically oriented (187 patients), geriatrically oriented (171 patients), and healthcare centre hospital (control, 180 patients). Main measures: At 12 months post-

fracture, we collected data regarding days in rehabilitation, post-rehabilitation hospital treatment, other healthcare service use, number of re-operations, taxi use by patient or relative, and help from relatives. Results: Control rehabilitation (4945,2€) was significantly less expensive than physical (6609.0€, p=0.002) and geriatric rehabilitation (7034.7€ p<0.001). Total institutional care costs (primary treatment, rehabilitation, and post-rehabilitation hospital care) were lower for control (13,438.4€) than geriatric rehabilitation (17,201.7€, p<0.001), but did not differ between control and physical rehabilitation (15659.1€, p=0.055) or between physical and geriatric rehabilitation (p=0.252). Costs of help from relatives (estimated as 30%, 50% and 100% of a home aid's salary) with physical rehabilitation were lower than control (p=0.016) but higher than geriatric rehabilitation (p=0.041). Total hip fracture treatment costs were lower with physical (36,356€, 51,018€) than control rehabilitation (38,018€, 57,031€) at 50% and 100% of salary (p=0.032, p=0.014, respectively). At one year post-fracture, 15D-score was significantly higher in physical rehabilitation group (0.697) than geriatric rehabilitation group (0.586, p=0.008) and control group (0.594, p=0.009). Conclusions: Considering total costs one year after hip fracture the treatment including physical rehabilitation is significantly more cost-effective than routine treatment. This effect could not be seen between routine treatment and treatment including geriatric rehabilitation.

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Bone and Joint Journal (UK)

June 2017, Volume 99-B, Issue 6

Osteoporosis International

June 2017, Volume 28, Issue 6

Exercise: Creating a Search Strategy

Scenario: A 64 year old obese male who has tried many ways to lose weight presents with a newspaper article about 'fat-blazer' (chitosan). He asks for your advice.

1. **What would your PICO format be?**

Population/problem	
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Outcome	

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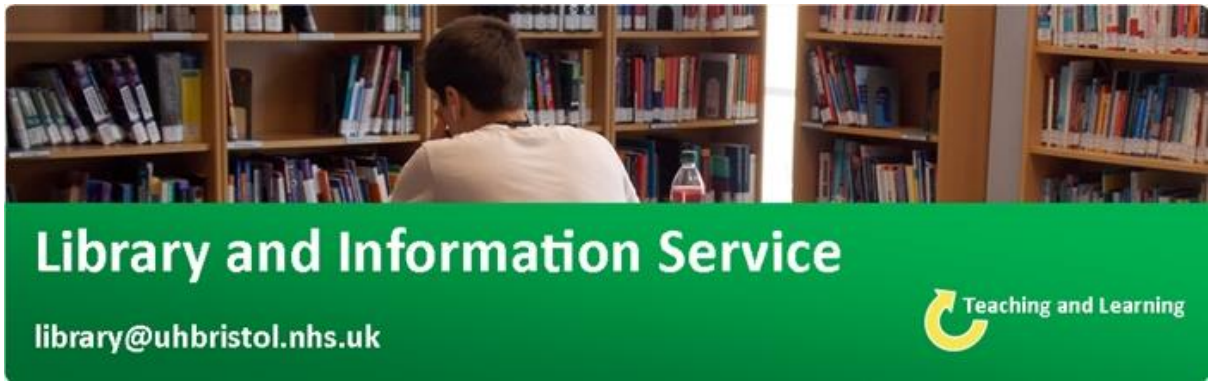

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