

## References: Atypical Presentation

### REF ID: 1986

#### Level IV: Non-experimental study

#### Topic 3: Assessment

**Bellia, V., Battaglia, S., Catalano, F., Scichilone, N., Incalzi, R. A., & Imperiale, C. et al. (2003).** Aging and disability affect misdiagnosis of COPD in elderly asthmatics: The SARA study. *Chest*, 123(4), 1066-1072.

#### **Journal Article, Research, Tables/Charts**

STUDY OBJECTIVES: This study investigated to what extent a diagnosis of COPD is erroneously made or the disease remains unrecognized in elderly asthmatic patients, and identified factors leading to misdiagnosis and underdiagnosis of asthma in such patients. DESIGN: A multicenter study involving 24 Italian pulmonary or geriatric institutions. PATIENTS: One hundred twenty-eight asthmatic patients (98 women, 76.6%) aged 73 +/- 6.4 years (mean +/- SD) were selected from the cohort of the Salute Respiratoria nell'Anziano (respiratory health in the elderly) study. METHODS: All patients underwent a clinical evaluation that included clinical history and spirometry with a bronchodilator test. A diagnosis of asthma was based on criteria proposed by international guidelines adapted to the elderly population. A multidimensional geriatric assessment was performed to estimate physical and cognitive impairments and mood state. Finally, the diagnosis of respiratory disease previously made by a doctor, if any, was recorded. RESULTS: Of asthmatic patients, COPD had been improperly diagnosed in 19.5%, whereas 27.3% of asthmatic patients did not report any previous diagnosis of asthma. The main correlates of misdiagnosis were older age and disability. Conversely, underdiagnosis was associated with better functional conditions, expressed by spirometry, even when wheezing or a significant response to the bronchodilator test occurred. CONCLUSIONS: Asthma in the elderly is frequently confused with COPD. Misdiagnosis can be related to older age and to greater degree of disability. Asthma in patients with mild functional impairment may be underdiagnosed in spite of overt respiratory symptoms suggestive of asthma.

### REF ID: 1992

#### Level VI: Opinion

#### Topic 3: Assessment

**Bentley, D. W., Bradley, S., High, K., Schoenbaum, S., Taler, G., & Yoshikawa, T. T. (2001 Feb).** Practice guideline for evaluation of fever and infection in long-term care facilities. *Journal of the American Geriatrics Society*, 49(2), 210-222.

#### **Journal Article. Review**

The elderly population (i.e., persons aged > or = 65 years) in the United States is rapidly expanding and will nearly double in number over the next 30 years. It is estimated that >40% of persons aged > or = 65 years will require care in a long-term care facility (LTCF), such as a skilled nursing facility (SNF), at some point during their lifetime. For the most part, residents of LTCFs are very old and have age-related immunologic changes, chronic cognitive and/or physical impairments, and diseases that alter host resistance; therefore, they are highly susceptible to infections and their complications. The diagnosis of infections in residents of LTCFs is often difficult because LTCFs differ from acute-care facilities in their goals of care, staffing ratios, types of primary care providers, availability of laboratory tests, and criteria for infections. Consequently, guidelines and standards of practice used for diagnosis of infections in patients in acute-care facilities may not be applicable nor appropriate for residents in LTCFs. Moreover, the clinical manifestations of diseases and infections are often subtle, atypical, or nonexistent in the very old. Fever may be low or absent in LTCF residents with infection. The initial evaluation of an LTCF resident suspected of an infection may not be done by a physician. Although nurses commonly perform initial assessments for infection in residents of LTCFs, further studies are needed to determine the appropriateness and validity of this practice. Provided there are no directives

(advance or current by resident or caregiver) limiting diagnostic or therapeutic interventions, all residents of LTCFs with suspected symptomatic infection should have appropriate diagnostic laboratory studies done promptly, and the findings should be discussed with the primary care clinician (see Recommendations). The most common infections among LTCF residents are urinary tract infections, respiratory infections, skin or soft tissue infections, and gastroenteritis. Decisions concerning possible transfer of an LTCF resident to an acute-care facility are best expressed through an advance directive or, when not available, through transfer policies developed by the LTCF. In general, LTCF residents have been transferred to an acute-care facility when any of the following conditions exist: (1) the resident is clinically unstable and the resident or family goals indicate aggressive interventions should be initiated, (2) critical diagnostic tests are not available in the LTCF, (3) necessary therapy or the mode of administration of therapy (frequency or monitoring) are beyond the capacity of the LTCF, (4) comfort measures cannot be assured in the LTCF, and (5) specific infection-control measures are not available in the LTCF. [References: 108]

**REF ID: 1982**

**Level IV: Non-experimental study**

**Topic 3: Assessment**

**Chodosh, J., Petitti, D. B., Elliott, M., Hays, R. D., Crooks, V. C., & Reuben, D. B. et al. (2004). Physician recognition of cognitive impairment: Evaluating the need for improvement. *Journal of the American Geriatrics Society*, 52(7), 1051-1059.**

**Journal Article, Research, Tables/Charts**

Objectives: To assess physician recognition of dementia and cognitive impairment, compare recognition with documentation, and identify physician and patient factors associated with recognition. Design: Survey of physicians and review of medical records. Setting: Health maintenance organization in southern California. Participants: Seven hundred twenty-nine physicians who provided care for women participating in a cohort study of memory (Women's Memory Study). Measurements: Percentage of patients with dementia or cognitive impairment (using the Telephone Interview of Cognitive Status supplemented by the Telephone Dementia Questionnaire) recognized by physicians. Relationship between physician recognition and patient characteristics and physician demographics, practice characteristics, training, knowledge, and attitudes about dementia. Results: Physicians (n=365) correctly identified 81% of patients with dementia and 44% of patients with cognitive impairment without definite dementia. Medical records documented cognitive impairment in 83% of patients with dementia and 26% of patients with cognitive impairment without definite dementia. In a multivariable model, physicians with geriatric credentials (defined as geriatric fellowship experience and/or the certificate of added qualifications) recognized cognitive impairment more often than did those without (risk ratio (RR)=1.56, 95% confidence interval (CI)=1.04-1.66). Physicians were more likely to recognize cognitive impairment in patients with a history of depression treatment (RR=1.3, 95% CI=1.03-1.45) or stroke (RR=1.37, 95% CI=1.04-1.45) and less likely to recognize impairment in patients with cognitive impairment without definite dementia than in those with dementia (RR=0.46, 95% CI=0.23-0.72) and in patients with a prior hospitalization for myocardial infarction (RR=0.37, 95% CI=0.09-0.88) or cancer (RR=0.49, 95% CI=0.18-0.90). Conclusion: Medical record documentation reflects physician recognition of dementia, yet physicians are aware of, but have not documented, many patients with milder cognitive impairment. Physicians are unaware of cognitive impairment in more than 40% of their cognitively impaired patients. Additional geriatrics training may promote recognition, but systems solutions are needed to improve recognition critical to provision of emerging therapies for early dementia.

**REF ID: 1983**

**Level V: Case report**

**Topic 3: Assessment**

**Chow, K. Y., Lee, C. E., Ling, M. L., Heng, D. M. K., & Yap, S. G. (2004). Outbreak of severe acute respiratory syndrome in a tertiary hospital in singapore, linked to an index patient with atypical presentation: Epidemiological study. *BMJ*, 328(7433), 195-198.**

### **Journal Article, Research**

**OBJECTIVE:** To describe an outbreak of severe acute respiratory syndrome (SARS) in a tertiary hospital in Singapore, linked to an index patient with atypical presentation, and the lessons learnt from it. **DESIGN:** Descriptive study. **SETTING:** A tertiary hospital in Singapore. **PARTICIPANTS:** Patients, healthcare workers, and visitors who contracted SARS in Singapore General Hospital. **MAIN OUTCOME MEASURES:** Probable SARS as defined by the World Health Organization. **RESULTS:** The index patient presented with gastrointestinal bleeding, initially without changes to his chest radiograph. Altogether 24 healthcare workers, 15 patients, and 12 family members and visitors were infected. The incubation period ranged from three to eight days. Only 13 patients were isolated on their dates of onset. **CONCLUSIONS:** Atypical presentation of SARS infection must be taken into consideration when managing patients with a history of contact with SARS patients. The main gap in the containment strategy in this outbreak was the failure to identify the index patient as someone who had been discharged from a ward in another hospital that managed probable SARS cases. Strict infection control measures, a good surveillance system, early introduction of isolation procedures, and vigilant healthcare professionals are essential for controlling outbreaks. PMID: 14726369 [PubMed - indexed for MEDLINE]

### **REF ID: 1980**

#### **Level IV: Non-experimental study**

##### **Topic 3: Assessment**

**Fife, D., & FitzGerald, J. E. (2005). Do patients with benign paroxysmal positional vertigo receive prompt treatment? analysis of waiting times and human and financial costs associated with current practice. *International Journal of Audiology*, 44(1), 50-57.**

#### **Journal Article, Research, Tables/Charts**

This study retrospectively analysed how 20 patients with posterior canal benign paroxysmal positional vertigo (BPPV) were managed from primary care, to treatment in tertiary care. The average time from first referral to treatment was 93 weeks, with an average of 58 weeks within primary care and 40 weeks within hospital care. At least 85% of cases had classical symptoms of BPPV and could have been easily identified by Primary Care Physicians at first referral, had they been trained to recognise and diagnose the condition. It was concluded that patients could be treated more efficiently and at less cost if the condition was identified at first referral in primary care, and treated in either primary care or dedicated BPPV clinics receiving referrals from primary care. A dedicated clinic for BPPV is recommended, which will substantially reduce waiting time for treatment and save primary care and hospitals time and money by avoiding unnecessary appointments and medication.

### **REF ID: 2019**

#### **Level V: Case report**

##### **Topic 3: Assessment**

**Finsterer, J. (2006; 2006). Consequences of misdiagnosing mitochondrial disorder. *International Journal of Neuroscience*, 116(8), 907-914.**

#### **Journal; Peer Reviewed Journal**

Diagnosing mitochondrial disorder remains a challenge. In a 75-year-old women, with short stature, muscle cramps, ptosis, fasciculations and progressive, proximal limb weakness and wasting, hyponatremia, abnormal lactate-stress-test, and slightly abnormal electromyography, muscle biopsy suggested granulomatous myositis. Corticosteroids and azathioprin were ineffective. After a second work-up amyotrophic-lateral-sclerosis was diagnosed. Riluzole was started, without effect. She developed respiratory insufficiency, requiring mechanical ventilation. Apical ballooning was found. After switching to non-invasive positive pressure ventilation and physiotherapy, she markedly improved. After a third diagnostic work-up, mitochondrial disorder was suspected. Unfortunately, she died suddenly from a cardiac arrhythmia at home. Mitochondrial disorder may mimic motor neuron disease, muscle biopsy may mimic myositis, and may show only little evidence for respiratory chain disorder. (PsycINFO Database Record (c) 2006 APA, all rights reserved) (journal abstract)

**REF ID: 1989****Level V: Case report****Topic 1: Risks**

**Greenwald, D. A. (2004 Sep 6). Aging, the gastrointestinal tract, and risk of acid-related disease. *American Journal of Medicine*, 117(Suppl 5A), 8S-13S.**

**Journal Article. Review**

It is estimated that by 2020, >16% of people in the United States will be > or =65 years of age and that nearly 20 million will be >85 years of age. Aging imparts a variety of physiologic changes in the oropharynx, esophagus, and stomach that increase the risk for esophageal and gastrointestinal disorders. Older individuals also tend to have a higher prevalence of comorbid factors, such as *Helicobacter pylori* infection, smoking, presence of other diseases, or use of medications (e.g., nonsteroidal anti-inflammatory drugs [NSAIDs]) that increase their risk for acid-related disorders. Given these physiologic and comorbidity factors, the elderly are at higher risk for gastroesophageal reflux disease (GERD), pill-induced esophagitis, peptic ulcer disease, and complications related to the use of NSAIDs. Unfortunately, in the elderly patient with these disorders--even those with severe disease or complications--symptom presentation may be subtle or atypical, resulting in a delayed diagnosis. Endoscopy remains the "gold standard" for the identification of mucosal disease and should be performed in all patients with "new-onset" or persistent symptoms who are >45 years of age, as well as in individuals of any age who present with alarm symptoms, such as weight loss, vomiting, anemia, dysphagia, or evidence of gastrointestinal bleeding. In general, the treatment of older individuals with peptic ulcer or GERD and its complications is similar to that of younger individuals. Proton pump inhibitors are the mainstay of therapy for symptom relief, healing of erosive esophagitis, resolution of peptic ulceration, reduction of the risk for NSAID-induced mucosal damage, and prevention of disease recurrence. [References: 33]

**REF ID: 2026****Level III: Quasi-experimental study****Topic 1: Risks**

**Hasin, D. S., & Grant, B. F. (2002; 2002). Major depression in 6050 former drinkers: Association with past alcohol dependence. *Archives of General Psychiatry*, 59(9), 794-800.**

**Journal; Peer Reviewed Journal**

Investigated the association of past alcohol dependence (ALD) with current major depression (MDD) was investigated in subjects (Ss) who no longer drink or who drink very little. Data were derived from the National Longitudinal Alcohol Epidemiologic Survey. 6,050 former drinkers who did not use drugs or smoke in the past year were divided into those with and without past DSM-IV ALD. These 2 groups were compared for the presence of current (last 12 mo) DSM-IV MDD. The association between prior ALD and current MDD was tested with linear logistic regression, controlling for other variables. Prior ALD increased the risk of current MDD more than 4-fold. This relationship was not attenuated by control variables. The majority of Ss with MDD last used substances 2 or more years prior to the interview, which eliminates acute intoxication or withdrawal effects as an explanation of their depressions. The strong, specific association between prior ALD and current or recent MDD in a nationally representative sample of former drinkers indicates that the association is not entirely an artifact of misdiagnosed intoxication and withdrawal effects. A better understanding of the nature of the relationship between the 2 disorders should be sought and will have important public health significance. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 1981****Level IV: Non-experimental study****Topic 3: Assessment**

**Hohl, C. M., Robitaille, C., Lord, V., Dankoff, J., Colacone, A., & Pham, L. et al. (2005).**

**Emergency physician recognition of adverse drug-related events in elder patients presenting to an emergency department. *Academic Emergency Medicine*, 12(3), 197-205.**

**Journal Article, Research, Tables/Charts**

**OBJECTIVES:** The authors examined the ability of emergency physicians (EPs) to recognize adverse drug-related events (ADREs) in elder patients presenting to the emergency department (ED).  
**METHODS:** This was a prospective observational study of patients at least 65 years of age who presented to the ED. ADREs were identified using a validated, standardized scoring system. EP recognition of ADREs was assessed through physician interview and subsequent chart review.  
**RESULTS:** A total of 161 patients were enrolled in the study. Thirty-seven ADREs were identified, which occurred in 26 patients (16.2%; 95% confidence interval [CI] = 10.5% to 22.0%). The treating EPs recognized 51.2% (95% CI = 35.2% to 67.4%) of all ADREs. There was better recognition of those ADREs related to the patient's chief complaint (91%; 95% CI = 74.1% to 100%) as compared with recognition of ADREs that were not associated with the chief complaint (32.1%; 95% CI = 14.8% to 49%). EPs recognized six of seven severe ADREs (85.7%), 13 of 23 moderate ADREs (56.5%; 95% CI = 36.8% to 77%), and none of the mild ADREs. Recognition of ADREs varied with medication class.  
**CONCLUSIONS:** EP performance was superior at identifying severe ADREs relating to the patients' chief complaints. However, EP performance was suboptimal with respect to identifying ADREs of lower severity, having missed a significant number of ADREs of moderate severity as well as ones unrelated to the patients' chief complaints. ADRE detection methods need to be developed for the ED to aid EPs in detecting those ADREs that are most likely to be missed.

**REF ID: 1991**

**Level V: Case report**

**Topic 3: Assessment**

**Kennes, B. (2001 Jun). [Chronic pain in geriatrics]. *Revue Medicale De Bruxelles*, 22(3), 152-160. Journal Article. Review**

Pain is frequent in communicative or no-communicative, ambulatory, institutionalized or hospitalized veterans. It is associated with severe comorbidity so much more than chronic pain could be neglected and expressed of atypical manner or masked by the absence of classical symptoms in particular in case of dementia or of sensory disorders. Pain detection by clinic examination or by pain assessment's methods and adequate approach by pharmacological and non pharmacological therapies are essential for correct pain management. On pharmacological plan, the strategy of the O.M.S. landings is applicable owing to a more particular attention to secondary effects and drugs interactions. AINS must be manipulated with prudence. There are no reasons to exclude opioïdes from the therapeutic arsenal but with a reduction of the starting doses, a regular adaptation and a very attentive survey. In drugs of landing 2, tramadol reveals itself as efficient and better tolerated as the codeine and dextropropoxyphene has to be to avoid. The obtaining of a satisfactory result depends on a regular assessment of the pain in a context of polydisciplinar approach (physicians, nurses, paramedicals, other care givers). [References: 21]

**REF ID: 2021**

**Level IV: Non-experimental study**

**Topic 3: Assessment**

**Leach, J. P., Lauder, R., Nicolson, A., & Smith, D. F. (2005; 2005). Epilepsy in the UK: Misdiagnosis, mistreatment, and undertreatment? the wrexham area epilepsy project. *Seizure*, 14(7), 514-520. Journal; Peer Reviewed Journal**

**Journal; Peer Reviewed Journal**

**Objective:** To assess the diagnostic and therapeutic difficulties in patients with epilepsy who had never come into contact with specialist services. **Methods:** Assessment was offered to 676 patients diagnosed as having epilepsy and receiving anti-epileptic drug therapy (AED), who had no previous contact with the local epilepsy services. Two hundred and seventy-five patients gave consent and attended for reassessment. We identified the proportion of patients (a) who had previously seen a neurologist, (b) in whom the diagnosis of epilepsy was not secure, (c) in whom planned AED withdrawal could be considered (d) in whom seizure control could be improved. **Results:** 53/275 (19.3%) of those attending for review had previously been seen by a neurologist. 87/275 (31.6%) patients ultimately received continued specialist care. Diagnostic doubt was expressed in 3/53 (5.6%) and 42/222 (18.9%) of patients

diagnosed by neurologist and non-specialist, respectively. Of 133/219 (60.7%) of patients whose epilepsy was in remission, only 6 elected to withdraw or change medication. Of 18 patients with diagnostic doubt who accepted follow-up, 12 successfully stopped treatment. 17/55 (30.9%) patients with active epilepsy (10 partial, 7 generalised) achieved at least a 1 year remission consequent upon treatment in this clinic. In 15 cases this was a first ever remission. Conclusion: Approximately 55% of the population of adults receiving treatment for epilepsy have never received specialist advice. Reassessment of these patients uncovers diagnostic uncertainty, failure to classify (leading to sub-optimal therapy) and lack of information and advice about all aspects of epilepsy care. The development of integrated services for people with epilepsy (PWE) must take account of this hidden need. The new General Medical Services contract for general practitioners will bring this need to our attention, and our experience will help predict the measures required to deal with the under-treatment and mistreatment of this group. The majority of PWE, not currently receiving shared care, merit reassessment and approximately one-third will require continued specialist care. Existing services do not have the capacity to process a marked increase in rate of referral. This project informs prioritisation of referrals and service reorganisation. (PsycINFO Database Record (c) 2006 APA, all rights reserved) (journal abstract)

**REF ID: 1978**

**Level IV: Non-experimental study**

**Topic 3: Assessment**

**Lemiengre, J., Nelis, T., Joosten, E., Braes, T., Foreman, M., & Gastmans, C. et al. (2006).**

**Detection of delirium by bedside nurses using the confusion assessment method. *Journal of the American Geriatrics Society*, 54(4), 685-689.**

**Journal Article, Research, Tables/Charts**

A prospective, descriptive study was used to assess the diagnostic validity of the Confusion Assessment Method (CAM) administered at the bedside by nurses in daily practice. Two different scoring methods of the CAM (the specific (SPEC) and sensitive (SENS) methods) were compared with a criterion standard (CAM completed by trained research nurses). During a 5-month period, all patients consecutively admitted to an acute geriatric ward of the University Hospitals of Leuven (Belgium) were enrolled in the study. The 258 elderly inpatients who were included underwent 641 paired but independent ratings of delirium by bedside and trained research nurses. Delirium was identified in 36 of the 258 patients (14%) or in 42 of the 641 paired observations (6.5%). The SENS method of the CAM algorithm as administered by bedside nurses had the greatest diagnostic accuracy, with 66.7% sensitivity and 90.7% specificity; the SPEC method had 23.8% sensitivity and 97.7% specificity. Bedside nurses had difficulties recognizing the features of acute onset, fluctuation, and altered level of consciousness. For both scoring methods, bedside nurses had difficulties with the identification of elderly patients with delirium but succeeded in diagnosing correctly those patients without delirium in more than 90% of observations. Given these results, additional education about delirium with special attention to guided training of bedside nurses in the use of an assessment strategy such as the CAM for the recognition of delirium symptoms is warranted.

**REF ID: 1979**

**Level V: Case report**

**Topic 3: Assessment**

**McSweeney, J. C., Lefler, L. L., & Crowder, B. F. (2005). What's wrong with me? women's coronary heart disease diagnostic experiences. *Progress in Cardiovascular Nursing*, 20(2), 48-57.**

**Journal Article, Research, Tables/Charts**

Most women are unaware that they may experience atypical coronary heart disease (CHD) symptoms. Women's atypical presentation often results in women having difficulty being diagnosed with CHD or myocardial infarction. Investigating women's CHD diagnostic experiences may reveal vital areas amenable to intervention. This secondary analysis explored women's CHD diagnostic experiences. Forty women completed in-depth interviews in their homes that were audiotaped and lasted 2-3 hours. Using content analysis and constant comparison, five themes emerged: awareness, seeking

treatment, frustration, treatment decisions, and anger. Despite numerous symptoms and visits with clinicians, most women were not diagnosed with CHD before myocardial infarction. During the infarction, women with typical symptoms were easily diagnosed while those with atypical symptoms received a delayed diagnosis. Those who repeatedly sought treatment were angry about not being diagnosed earlier. Further research is needed to promote early symptom recognition, timely diagnosis, and efficacious treatment-keys to improving women's CHD outcomes and to preventing similar negative diagnostic experiences.

**REF ID: 1984**

**Level IV: Non-experimental study**

**Topic 3: Assessment**

**Neuner, J. M., Zimmer, J. K., & Hamel, M. B. (2003). Diagnosis and treatment of osteoporosis in patients with vertebral compression fractures. *Journal of the American Geriatrics Society*, 51(4), 483-491.**

**Journal Article, Research, Tables/Charts**

**OBJECTIVES:** To determine whether patients with vertebral compression fractures are diagnosed with or treated for osteoporosis. **DESIGN:** Retrospective cohort study. **SETTING:** Two primary care practices in Massachusetts. **PARTICIPANTS:** Two hundred six patients with vertebral compression fractures noted on routine radiographs in 1997-1998. **MEASUREMENTS:** Percentage of patients diagnosed with osteoporosis and treated with prescription medications (estrogen, bisphosphonates, raloxifene, or calcitonin). Factors associated with missed osteoporosis diagnosis and treatment, including risk factors for osteoporosis, comorbidities, vertebral fracture severity, and processes of care communication were also examined. **RESULTS:** The median patient age was 76, 71% of the cohort was female, and 13% of patients had a history of corticosteroid use. Thirty-eight percent of subjects (46% of women and 19% of men) were diagnosed with osteoporosis and 32% (39% of women and 14% of men) received prescription medications for osteoporosis. Of women who were diagnosed with osteoporosis, 69% received prescription medications. In adjusted analyses women younger than 50 (adjusted odds ratio (AOR) = 0.09; 95% confidence interval (CI) = 0.01-0.71) and 90 and older (AOR = 0.27; 95% CI = 0.08-0.98) were less likely to be diagnosed with osteoporosis, whereas women with a prior hip or radial fracture (AOR = 3.65; 95% CI = 1.28-10.38) or back pain (AOR = 2.84; 95% CI = 1.38-5.85) were more likely to be diagnosed with osteoporosis. **CONCLUSIONS:** Physicians frequently did not diagnose osteoporosis in primary care patients with vertebral fractures, missing an important preventive opportunity for patients at high risk for future fractures. Efforts targeted to improving diagnosis of osteoporosis could improve patient care.

**REF ID: 1990**

**Level V: Case report**

**Topic 3: Assessment**

**Olde Rikkert, M. G., Rigaud, A. S., van Hoeyweghen, R. J., & de Graaf, J. (2003 Mar). Geriatric syndromes: Medical misnomer or progress in geriatrics? *Netherlands Journal of Medicine*, 61(3), 83-87.**

**Journal Article. Review**

Both in geriatric and internal medicine journals, and in medical textbooks certain (aggregates of) symptoms are labelled as 'geriatric syndromes'. In frail elderly patients a large number of diseases present with well-known and highly prevalent atypical symptoms (e.g. immobility, instability, impaired cognition and incontinence), which are referred to as geriatric syndromes. While classically the term syndrome is used for grouping together multiple symptoms with a single pathogenetic pathway, geriatric syndrome primarily refers to one symptom or a complex of symptoms with high prevalence in geriatrics, resulting from multiple diseases and multiple risk factors. The geriatric workup should therefore consist of both a search for and treatment of the aetiologically related diseases and a risk factor assessment and reduction. Effectiveness and efficiency of this specific geriatric syndrome workup has been demonstrated predominantly for combinations of geriatric syndromes that often serve as targeting criteria for geriatric interventions, and for some specific geriatric syndromes. Therefore, we argue that

the concept of geriatric syndromes is valuable as a theoretical frame, a directive for diagnostic analysis and as an educational tool in teaching geriatrics to medical students and trainees. Added to this, explaining the heterogeneous way 'syndrome' is used in current clinical practice, as opposed to 'disease', will also substantially improve clinical reasoning both in geriatrics and general internal medicine.  
[References: 24]

**REF ID: 1395**

**Level VI: Opinion**

**Topic 3: Assessment**

**Piven, M. L. S. (2001). Detection of depression in the cognitively intact older adult protocol... copyright (c) [1998] the university of iowa gerontological nursing interventions research center research dissemination core. all rights reserved. republished with permission. *Journal of Gerontological Nursing*, 27(6), 8-14.**

**Journal Article, Forms, Protocol, Questionnaire/Scale, Tables/Charts**

**REF ID: 2028**

**Level V: Case report**

**Topic 3: Assessment**

**Prokhorova, M., & Fritz, S. (2002; 2002). Case of a 73-year-old man with dementia and a likely pheochromocytoma mistaken for anxiety disorder. *Psychosomatics: Journal of Consultation Liaison Psychiatry*, 43(1), 82.**

**Journal; Peer Reviewed Journal**

Presents the case of a 73-yr-old man who presented to the hospital with behavioral difficulties secondary to a mixed dementia of vascular and Alzheimer-type etiologies. Additional medical and psychiatric history included hypertension and a cerebrovascular accident. His behavioral difficulties were treated with paroxetine 20 mg every morning and lorazepam for agitation. The patient's agitation improved over time; however, he later experienced an episode of facial flushing, tremor, weakness, and tearfulness lasting several minutes, after which he bent over, started to rock, and fell on the floor. He was continued on paroxetine because of the assumption that these episodes represented anxiety attacks. Over time, a correlation between the "anxiety attacks" and abnormal vital signs became evident, and these were improved only with droperidol. An EEG showed only generalized slowing. Pheochromocytoma was then considered as an alternative explanation. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 1993**

**Level V: Case report**

**Topic 3: Assessment**

**Qureshi, A. M., McDonald, L., & Primrose, W. R. (2000 Dec). Management of myocardial infarction in the very elderly--impact of clinical effectiveness on practice. *Scottish Medical Journal*, 45(6), 180-182.**

**Journal Article**

The presentation of myocardial infarction in the elderly is often atypical and there is therefore a broad range of clinical presentations where this diagnosis should be actively considered and the appropriate investigations arranged. The early use of aspirin and thrombolytic therapy has revolutionised management and efforts should be made to employ these interventions wherever possible. We present the results of an audit showing how the introduction of local guidelines improved the early management of myocardial infarction in the elderly. We also found that in this group of patients cardiac enzyme assays were more useful in establishing the diagnosis than the electrocardiogram.

**REF ID: 1988**

**Level V: Case report**

**Topic 3: Assessment**

**Rutschmann, O. T., Chevalley, T., Zumwald, C., Luthy, C., Vermeulen, B., & Sarasin, F. P. (2005 Mar 5). Pitfalls in the emergency department triage of frail elderly patients without specific complaints. *Swiss Medical Weekly*, 135(9-10), 145-150.**

## **Journal Article**

**QUESTION UNDER STUDY:** Elderly patients represent an increasing proportion of emergency department (ED) admissions. When no specific complaint is identified, the reason for referral is commonly called "home care impossible". The aim of this study was to describe a population of elderly patients who present to the ED of a 1200-bed university hospital without specific complaint, and to assess how they were evaluated in the ED. **METHODS:** Data on triage, mode of admission and discharge were collected. After the initial evaluation in the ED, patients were classified in two categories: (1) patients identified with a medical problem requiring rapid care or investigation, (2) patients without a medical problem considered as true "home care impossible". These latter patients underwent a complete assessment using the Minimal Data Set-Home Care (MDS-HC). **RESULTS:** During the 10-week study period 253 patients (mean age 81 years) were referred because of "home care impossible". An acute medical problem was identified in 129 of those patients (51%). All these patients were triaged in lower acuity categories. 33 (26%) were undertriaged due to (1) absence of vital signs measurement, (2) poor recognition of neurological symptoms, (3) atypical clinical presentation. The remaining patients were considered as true "home care impossible". The MDS-HC evaluation revealed a high level of biopsychosocial comorbidities. **CONCLUSIONS:** Frail elderly patients admitted without specific complaints are at risk of inappropriate or delayed evaluation due to undertriage at the door of the ED. A more specific geriatric assessment should be integrated early in the triage process of these patients.

### **REF ID: 1963**

#### **Level V: Case report**

#### **Topic 3: Assessment**

**Salles, N., Kressig, R. W., & Michel, J. P. (2003; 2003). Management of chronic dizziness in elderly people. *Zeitschrift Fur Gerontologie Und Geriatrie*, 36(1), 10-15.**

#### **Journal; Peer Reviewed Journal**

Dizziness is a frequent complaint in elderly people, and is a broad term used to explain various abnormal sensations related to the perception of the body's relationship to space. Classically, four subtypes are described: vertigo, pre-syncopal lightheadedness, disequilibrium, and other dizziness. Dizziness is often a chronic complaint in elderly people and may lead to dramatic worsened functional and psychosocial outcomes. Dizziness should be approached as a symptom and as a syndrome. In fact, physicians should exclude potential curable causes of dizziness, considering dizziness as a symptom of specific diseases. As dizziness is often multifactorial, it should also be treated as a geriatric syndrome. Physicians should, thus, identify risk factors of recurrent dizziness. The "Dizziness Handicap Inventory Scale" may assist the clinician to establish the extent of the "dizziness" problem. Specific causes of dizziness should be addressed as well as contributive factors (i.e., medications). Vestibular and balance rehabilitation with an interdisciplinary collaboration should start rapidly to avoid psycho-social complications, such as fear of falling. (PsycINFO Database Record (c) 2006 APA, all rights reserved) (journal abstract)

### **REF ID: 2027**

#### **Level V: Case report**

#### **Topic 3: Assessment**

**Shores, M. M., & Sloan, K. L. (2002; 2002). Phenytoin-induced visual disturbances misdiagnosed as alcohol withdrawal. *Psychosomatics: Journal of Consultation Liaison Psychiatry*, 43(4), 335-336.**

#### **Journal; Peer Reviewed Journal**

Reports a case of a 71-yr-old man with visual disturbance initially attributed to alcohol withdrawal that appeared to be due to an adverse reaction to phenytoin. This case illustrates the importance of taking careful history, keeping a broad differential, and recognizing that medically ill, elderly patients being treated with multiple medications may have adverse side effects, even at subtherapeutic levels. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

### **REF ID: 2020**

#### **Level V: Case report**

### **Topic 3: Assessment ; Topic 3: Assessment**

**Sobow, T., Kisiela, E., Luczak, O., & Kloszewska, I. (2005; 2005). Depression in the course of bipolar disorder and recurrent depressive disorder in the elderly: Diagnostic difficulties. *Psychiatria Polska*, 39(5), 963-975.**

**Journal; Peer Reviewed Journal**

Misdiagnosis of bipolar disorder in depressive patients is a common clinical problem estimated to be evident in up to 40% of patients. Elderly patients might be especially vulnerable to that sort of diagnostic error. Aim: To estimate the rate of misdiagnosis in the elderly (60yrs+) hospitalized due to depression and to establish clinical correlates that might improve diagnosis. Method: A retrospective analysis of medical records of all the patients hospitalized in the University based Psychogeriatric Ward and suffering from a depressive episode due to bipolar disorder or recurrent depressive disorder. Results: The rate of misdiagnosis was 54% in bipolar and 9% in recurrent depressive disorder. Bipolar patients were mainly misdiagnosed as having recurrent depression. A severe episode was more common in bipolar subjects (particularly in women) while recurrent depressive subjects tend to suffer from less severe but more protracted episodes. Somatic symptoms of depression were more prevalent among recurrent depressive subjects while psychotic features, particularly delusions, and, to the lesser extent, hallucinations, were more common in patients suffering from bipolar depression. Conclusions: Bipolar depression is very often misdiagnosed in the hospitalized elderly. There are several features that might help the clinician to distinguish it from recurrent depression. Long history of illness, high number of previous episodes, severe episodes and the presence of psychotic symptoms are typical for bipolar elderly while a protracted current episode and the presence of somatic symptoms of depression might indicate the diagnosis of recurrent depression. (PsycINFO Database Record (c) 2006 APA, all rights reserved) (journal abstract)

**REF ID: 2023**

#### **Level VI: Opinion**

##### **Topic 1: Risks**

**Thomas, S. P. (2005; 2005). From the editor--caution urged in prescribing psychotropic drugs for older patients. *Issues in Mental Health Nursing*, 26(4), 357-358.**

**Journal; Peer Reviewed Journal**

Since the 1990s, research has been published about inappropriate medication prescribing for elderly patients. Derived by consensus among prominent gerontologists, a list of 28 medications deemed "inappropriate" for senior citizens was developed. The reports warned doctors that 18 of the 28 medications should be avoided at any dose or frequency. The potential adverse effects of 14 of the 28 medications were deemed by the consensus panel to be severe. Seven psychotropic drugs (amitriptyline, chlordiazepoxide, diazepam, doxepin, flurazepam, hydroxyzine, and meprobamate) were included on the list. Researchers recommend greater inclusion of older people in clinical trials, drug utilization review, computerized physician order entry, and palmtop drug reference guides. What other steps could be taken? Greater attention should be paid to education of consumers. Do elders know that psychotherapy is effective in depressive illness? Is anyone asking them why they are depressed? Is normal grieving, perhaps produced by loss of a spouse or old friends, being mistaken for depression? I would welcome manuscripts addressing these questions, especially from international readers. Is inappropriate prescribing a uniquely American phenomenon, or is there a problem in your country as well? (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 2024**

#### **Level V: Case report**

##### **Topic 3: Assessment**

**Vollmayr, B., Lederbogen, F., & Hewer, W. (2005; 2005). Small bowel tumors misdiagnosed as functional gastrointestinal symptoms. *General Hospital Psychiatry*, 27(1), 78-80.**

**Journal; Peer Reviewed Journal**

Functional gastrointestinal symptoms are common and, in a majority of patients seen by a gastroenterologist, symptoms are not explained by structural or biochemical abnormalities. As there is a

high association of gastrointestinal symptoms with psychiatric disorders, most frequently depression, phobia and substance abuse, differential diagnosis of gastrointestinal complaints should include screening for psychiatric illness, but thorough searching for physical causes should not be terminated too early. Here we report on three patients referred to a psychiatric inpatient service from medical departments with diagnoses of functional gastrointestinal symptoms. Upon reexamination, small bowel tumors turned out to have caused the gastrointestinal complaints. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 2022**

**Level V: Case report**

**Topic 3: Assessment**

**Yi, X., Cook, A. J., HamillRuth, R. J., & Rowlingson, J. C. (2005; 2005). Cervicogenic headache in patients with presumed migraine: Missed diagnosis or misdiagnosis? [references]. *Journal of Pain*, 6(10), 700-703.**

**Journal; Peer Reviewed Journal**

The differential diagnosis of headache is often challenging, with significant clinical and socioeconomic consequences of incomplete or inaccurate diagnosis. Overlapping symptoms contribute to the diagnostic challenge. Four female patients, ages 26 to 69 with standing diagnoses of migraine, were evaluated and treated for complaints of chronic, severe headaches. All had obtained limited relief from migraine therapies. On physical examination, all had occipital nerve tenderness or positive Tinel sign over the occipital nerve. All responded well to occipital nerve blocks with local anesthetic, achieving complete or substantial pain relief lasting up to 2 months. We conclude that accurate diagnosis of occipital neuralgia or cervicogenic headache as contributing factors can lead to substantial headache relief through occipital nerve blocks in patients with coexisting or misdiagnosed migraine. Perspective: The pathophysiology of many types of chronic headaches is not well understood. Mixed mechanisms such as neurovascular, neuropathic, myofascial, and cervicogenic may all contribute. Our four patients with chronic headaches responded well to occipital nerve blocks. The neuroanatomical relationship between the trigeminocervical nucleus and occipital nerve may serve as the basis of efficacy for these blocks. (PsycINFO Database Record (c) 2006 APA, all rights reserved) (journal abstract)

**REF ID: 1985**

**Level V: Case report**

**Topic 1: Risks**

**Zwicker, C. D. (2003). The elderly patient at risk. *Journal of Infusion Nursing*, 26(3), 137-43, 178-82.**

**Journal Article, Case Study, CEU, Exam Questions, Tables/Charts**

As the baby-boom generation turn age 65, it is important that nurses are informed about the unique problems of the elderly patient, particularly because the elderly represent the highest percentage of clients in hospitals, homecare, and long-term and subacute nursing facilities. Infusion nurses, particularly those in homecare, are in a pivotal position to proactively identify acute illness at an early stage and thereby improve outcomes in this vulnerable population. To do this, infusion nurses must understand the normal changes that come with aging, the profile of the elderly patient at greatest risk for poor outcomes, and the often-atypical presentation of illness. Additionally, infusion nurses must be informed about tools used to assess and monitor the patient's status. Finally, infusion nurses must understand the increased potential for iatrogenesis in the elderly and provide proactive interventions to avert its occurrence to improve quality of life and outcomes for this population.