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Cancer

Comprehensive Geriatric Assessment: A case report on personalizing cancer care of an older adult patient with head and neck cancer

Clinical Journal of Oncology Nursing; Oct 2020; vol. 24 (5); p. 514-525
Strohschein FJ, et al.

Background: Understanding multidimensional screening and assessment is key to optimizing cancer care in older adults. Objectives: This article aims to present comprehensive geriatric assessment (CGA) as an approach to personalizing care for older adults with cancer. Methods: A case study of an 89-year-old man with head and neck cancer is presented as a framework to describe the process of CGA and an overview of geriatric oncology screening and assessment. Findings: CGA enables personalized care by informing decision making about cancer treatment and guiding implementation of enhanced supportive interventions. Screening tools can help identify older adult patients who would benefit from CGA. Oncology nurses can integrate geriatric assessment tools into practice to identify and address age-related concerns, facilitate communication, and contribute to personalization of care.

Eccrine Porocarcinoma: Avoiding Diagnostic Delay

Foot & Ankle Specialist; Oct 2020; vol. 13 (no. 5); p. 415-419
Jarocki C, et al.

Skin cancer is the most common cancer within the United States. Reports estimate that 1 in 5 Americans will develop some form of skin cancer. Eccrine porocarcinoma is a rare type of skin cancer of sweat gland origin. Eccrine porocarcinoma is most commonly found on the lower extremities. Clinically it may appear similar to benign skin lesions and it has significant metastatic potential. The authors present a case report with 22 months' follow-up. It describes a multiyear delay in diagnosis involving 3 specialties, including primary care, dermatology, and wound physical therapy. Information is given on techniques when high-risk cutaneous cancers are suspected or encountered. A multispecialty treatment plan is discussed. Levels of Evidence: Level V.

Social Isolation: Managing psychological distress in hospitalized patients during the COVID-19 pandemic

Clinical Journal of Oncology Nursing; Oct 2020; vol. 24 (5); p. 472-474

Cazeau N, et al.

The COVID-19 pandemic caused many hospitals and treatment centers to temporarily restrict or prohibit visitors to control viral spread. This article presents a case study of a patient receiving a bone marrow transplantation who experienced psychological distress during hospitalization because of social isolation. The National Comprehensive Cancer Network guidelines for distress management are used as a framework to outline a nursing plan of care for managing social isolation-related psychological distress in patients who are hospitalized during a worldwide pandemic.

A survey of ethnomedicinal plants used to treat cancer by traditional medicine practitioners in Zimbabwe

BMC Complementary Medicine & Therapies; Sep 2020; vol. 20 (1)

Matowa PR, et al.

Background: Traditional medicine plays an important role in health care provision in the developing world. A number of cancer patients have been found to be using traditional medicine as primary therapy and/or as complementary medicine. Cancer is one of the leading causes of morbidity and mortality globally among the non-communicable diseases. The aim of this study was to identify the plants used by traditional medicine practitioners (TMPs) in Zimbabwe to treat cancer. Methods: A structured questionnaire was used to interview consenting registered TMPs on ethnomedicinal plants they use to treat cancer. A review of published literature on the cited plants was also carried out. The practitioners were asked about the plants that they use to treat cancer, the plant parts used, type of cancer treated, other medicinal uses of the plants and preparation and administration of the plant parts. Results: Twenty (20) TMPs took part in the study. A total of 18 medicinal plant species were cited. The commonly treated types of cancer were breast, prostate, colon, skin and blood cancers with most plants being used to treat skin, blood and breast cancers, respectively. Of the medicinal plants cited, 44.4% were used to treat all cancer types. The most used plant parts were the roots (72.2%) and leaves (72.2%) followed by the bark (38.9%). The medicinal plants were used for multiple ailments. The most common plant preparation methods were infusion (72.2%) and decoction (66.7%) and the oral route of administration, as extracts and powder put in tea and porridge, was the most used. Conclusion: The frequently used plant parts were leaves and roots. The traditional uses of the medicinal plants cited in this study resonate well with their reported uses from other ethnopharmacological studies done in other parts of the world. The plants used by TMPs to treat cancer in Zimbabwe, if adequately explored, can be instrumental in the discovery and development of cancer drugs.

Cardiovascular Diseases

Outcomes in Patients Fully Covered With Coronary Artery Aneurysm and Stenosis Lesion by Second Generation Drug-Eluting Stents After 1 Year

Angiology; Nov 2020; vol. 71 (10); p. 942-947
Wu Z, et al.

We evaluated the safety and efficacy of second-generation drug-eluting stents (DES) fully covering a coronary artery aneurysm (CAA) and stenosis lesion. Patients (n = 33) with CAA and stenosis lesion (>60%) were enrolled between January 2014 and December 2017. Baseline characteristics and biochemical variables were recorded during hospital admission. Changes in CAA resolution (the reduction on CAA size), minimal lumen diameter (MLD), and diameter stenosis (DS) were determined before, just after, and 1 year after percutaneous coronary intervention (PCI). After DES implantation, MLD and DS after PCI were improved compared with those before PCI (P <.01). Also, thrombolysis in myocardial infarction blood flow was significantly enhanced after PCI (P <.01). One year after PCI, maximal CAA diameter in patients with CAA and stenosis lesion was significantly reduced compared with those just after PCI (P <.01). Meanwhile, CAA resolution ratio in these patients were more than those just after PCI (P <.01). Furthermore, there was a significant reduction about CAA length in these patients (P <.01). Last, there were no clinical events (including cardiac death, myocardial infarction, and revascularization) in the study. Second-generation DES implantation fully covering CAA and stenosis lesion was safe and effective.

Vegetarian, pescatarian and flexitarian diets: sociodemographic determinants and association with cardiovascular risk factors in a Swiss urban population

British Journal of Nutrition; Oct 2020; vol. 124 (8); p. 844-852
Wozniak H, et al.

Prevalence and trends of different vegetarian diets remain unknown, with estimates varying depending on the source. Evidence suggests that vegetarian diets are associated with a more favourable cardiovascular risk profile. The present study aimed to assess the prevalence and trends of different types of vegetarian diets in a population-based representative sample, sociodemographic characteristics of participants following such diets and the association of these diets with cardiovascular risk factors. Using repeated cross-sectional population-based surveys conducted in Geneva, Switzerland, 10 797 individuals participated in the study between 2005 and 2017. Participants were classified as vegetarians, pescatarians, flexitarians or omnivores using an FFQ. Sociodemographic and cardiovascular risk factors were evaluated through questionnaires, anthropometric measurements and blood tests. Findings show prevalence of vegetarians increased from 0·5 to 1·2 %, pescatarians from 0·3 to 1·1 % and flexitarians remained stable at 15·6 % of the population over the study period. Compared with omnivores, vegetarians were more likely to be young (OR 2·38; 95 % CI 1·01, 5·6), have higher education (OR 1·59; 95 % CI 1·01, 2·49) and lower income (OR 1·83; 95 % CI 1·04, 3·21); pescatarians and flexitarians were more likely to be women (pescatarian: OR 1·81; 95 % CI 1·10, 3·00; vegetarian: OR 1·57; 95 % CI 1·41, 1·75) and flexitarians were also more likely to have a lower income (OR 1·31; 95 % CI 1·13, 1·53). Participants who adhered to any diet excluding/reducing meat intake had lower BMI, total cholesterol and hypertension compared with omnivores. The present study shows an increase in the prevalence of vegetarians over a 13-year period and suggests that the different vegetarian diets assessed are associated with a better cardiovascular risk profile.

Cerebrovascular Disease

Are people with aphasia (PWA) involved in the creation of quality of life and aphasia impact-related questionnaires? a scoping review

Brain Sciences; Oct 2020; vol. 10 (10); p. 1-23
Charalambous M.; Annoni J.-M.; Kambanaros M.

Background: Quality of Life (QoL) questionnaires are used to describe the impact of aphasia on stroke survivors' life. People with aphasia (PWA) are traditionally excluded from research, potentially leading to a mismatch between the factors chosen in the tools and the realistic needs of PWA. The purpose of this review was to determine the direct involvement of PWA in the creation of QoL and aphasia impact-related questionnaires (AIR-Qs). Method(s): A scoping review methodology was conducted by an expert librarian and two independent reviewers on health sciences based on the Preferred Reporting Items for Systematic Reviews and Metanalyses extension for Scoping Reviews (PRISMA-ScR) protocol, through a literature search in five databases: Medline Complete, PubMed, PsychINFO, Scopus, and Google Scholar. Search terms included 'stroke', 'people with aphasia', 'communication', 'well-being', and 'quality of life'. Result(s): Of 952 results, 20 studies met the eligibility criteria. Of these, only four AIR-Qs studies (20%) were found reporting the direct involvement of PWA, while no QoL tools did so. Evidence showed involvement in the creation phase of AIR-Q, mainly in a consultation role. Conclusion(s): There is an absence of a framework for conducting and reporting the involvement of PWA in qualitative participatory research studies, which limits effectiveness to promote equitable best practice in aphasia rehabilitation.

Chip-based serum proteomics approach to reveal the potential protein markers in the sub-acute stroke patients receiving the treatment of Ginkgo Diterpene Lactone Meglumine Injection

Journal of Ethnopharmacology; Oct 2020; vol. 260
Fan Q, et al.

Ginkgo biloba L. is a kind of traditional Chinese medicinal material with a long history. Its main active ingredients, ginkgolides, can be used for the treatment of stroke and other cardio-cerebrovascular diseases. Ginkgo Diterpene Lactone Meglumine Injection (GDLI), a modernized TCM, has attracted much attention because of its neuroprotective and anti-inflammatory properties. Aim of the study: To uncover the effects of GDLI on ischemic stroke patients, as well as the underlying biomarkers involved in sub-acute stroke. We used a state-of-the-art targeted proteomics chip to investigate the association between numerous serum proteins (1101 proteins) and the sub-acute phase post-ischemic stroke. Then, the relative proteins of anti-apoptosis, anticoagulant, and neuroprotection of GDLI were verified in animal models. Compared with the serum from healthy volunteers, we identified 15 up-regulated proteins and 26 down-regulated proteins (FC ≥ 1.5) involved in inflammatory response, immune response, and nervous system development in the sub-acute ischemic stroke. The pro-inflammatory proteins, such as IL17, MSP-R, G–CSF–R, TLR3, MIP-3β, TNFRSF19, and TNFRSF12, were significantly increased in serum, illustrating that the chronic inflammatory state was evident in the sub-acute stage of ischemic stroke. However, the common pro-inflammatory proteins, such as IL-1β, IL-6, IL-8, TNF-α, IFN-γ, and IL-10, known to be up-regulated in acute stroke, had close or lightly lower levels than healthy humans (FC ≥ 1.5, P > 0.05). And some cytokines (IL3, CCL13, TNFRSF3, IL10 R beta, HLA-A, IL-1 F8/FIL1 eta, TNFRSF8, CCL18) were also markedly down-regulated in the sub-acute phase of stroke. These proteins are highly associated with the onset of stroke-induced immunosuppression and post-stroke infection. Moreover, we noticed that Ginkgo Diterpene Lactone Meglumine Injection (GDLI) treatment for 14 days was helpful to the recovery of patients in the subacute period. After the treatment of GDLI, it was observed that several inflammatory cytokines (i.e. IL-17 and IL-28A), chemokine (i.e. CCL14), and Coagulation Factor III were reduced. Meanwhile, the anti-inflammatory cytokines (IL-10 R alpha, GREMLIN, and Activin C) and neurotrophic factors (Neurturin and IGFBP2) were found to be up-regulated in stroke patients through self-control observation.

Finally, we identified the IGFBP2 as a novel marker in the animal models. In summary, the potential markers in sub-acute stroke patients were highly different from known protein markers in the acute phase of ischemic stroke. The serum protein IGFBP2 could be novel biomarkers for the treatment of GDLI in sub-acute stroke patients. Our present findings provide an innovative insight into the novel treatment of GDLI in ischemic stroke therapy. Image 1 • Compared with the serum from healthy volunteers, we identified 15 up-regulated proteins and 26 down-regulated proteins (FC≥1.5). The potential markers in sub-acute stroke patients were highly different from the known protein markers in the acute phase. • Ginkgo Diterpene Lactone Meglumine Injection (GDLI) treatment for 14 days was helpful to recovery in sub-acute stroke patients. It was observed that several inflammatory cytokines (i.e. IL-17 and IL-28A), chemokine (i.e. CCL14) and Coagulation Factor III were reduced; meanwhile, the anti-inflammatory cytokines (IL-10 R α, GREMLIN, and Activin C) and neurotrophic factors (Neurturin and IGFBP-2) were up-regulated in stroke patients through self-control observation. • The serum protein IGFBP2 could be novel biomarkers for the treatment of GDLI in sub-acute stroke patients.

COVID-19 Ischemic Strokes as an Emerging Rehabilitation Population: A Case Series
American Journal of Physical Medicine & Rehabilitation; Oct 2020; vol. 99 (10); p. 876-879
Diaz-Segarra N, et al.
Supplemental digital content is available in the text. There is emerging literature that coronavirus disease 2019 infections result in an increased incidence of thrombosis secondary to a prothrombotic state. Initial studies reported ischemic strokes primarily occurring in the critically ill coronavirus disease 2019 population. However, there have been reports of ischemic strokes as the presenting symptom in young noncritically ill coronavirus disease 2019 patients without significant risk factors. Further characterization of the coronavirus disease 2019 stroke population is needed. We present four cases of coronavirus disease 2019 ischemic strokes occurring in patients aged 37–68 yrs with varying coronavirus disease 2019 infection severities, premorbid risk factors, clinical presentations (eg, focal and nonfocal), and vascular distributions. These cases highlight the heterogeneity of coronavirus disease 2019 ischemic strokes. The duration of the coronavirus disease 2019–related prothrombotic state is unknown, and it is unclear whether patients are at risk for recurrent strokes. With more coronavirus disease 2019 patients recovering and being discharged to rehabilitation, physiatric awareness of this prothrombotic state and increased incidence of ischemic strokes is essential. Because of the variable presentation of coronavirus disease 2019 ischemic strokes, clinicians can consider neuroimaging as part of the evaluation in coronavirus disease 2019 patients with either acute focal or nonfocal neurologic symptoms. Additional studies are needed to clarify prothrombotic state duration, determine prognosis for recovery, and establish the physiatrist's role in long-term disease management.

Raising awareness and early detection of atrial fibrillation, an experience resorting to mobile technology centred on informed individuals

Research in social & administrative pharmacy : RSAP; Jun 2020; vol. 16 (6); p. 787-792
Cunha S, et al.

Background: Atrial fibrillation (AF) is a cardiac arrhythmia responsible for one third of ischemic strokes. Early detection of AF plays an important role in preventing embolic stroke. Objective: This study aimed to test the feasibility of an awareness event including opportunistic screening for atrial fibrillation; and to test the reliability of the innovative portable electrocardiogram (ECG) device used. Methods: An awareness campaign was held during two weeks, where individuals consenting to participate in a pharmacist-led detection event, received a manual pulse check, were clinically evaluated and subject to a single-lead electrocardiogram using AliveCor Kardia mobile. ECGs highlighted as possible AF were confirmed by the cardiologist and those signalled with abnormalities in cardiac rhythm were referred to their physician. Data were collected in a password protected application and analyzed using SPSS, v.24. The Kardia mobile's sensitivity and specificity was tested against the standard 12-lead ECG. Results: The awareness event involved 223 individuals, among which 205 were screened. Mean age was 66 years (SD=15) and hypertension was the most frequently reported (n=107; 52.2%). Mean CHAD2DS2- VASc score was 3 (SD=1.8). Cardiac irregularities were identified in 45 individuals, 14 confirmed to be new cases of AF (6.8%) by the cardiologist. The sensitivity and specificity were 90.9% and 97.4%. Conclusions: Data suggests this device to be potentially useful for opportunistic early detection of AF, provided interprofessional collaboration is guaranteed so that suspect cases are adequately managed and in a timely way. Fourteen new cases of AF were identified in the population studied, suggesting the pharmacist working in a multiprofessional context, may have had an important role in preventing potential ischemic-related strokes with this initiative. All healthcare professionals involved in the patient pathway should play a more active role in contributing to better health outcomes, particularly within primary care.

Dermatology

Cosmetic commentary: Is bakuchiol the new "skincare hero"?

Journal of Cosmetic Dermatology; 2020
Spierings NMK.

Bakuchiol is a new trendy ingredient in cosmetic skincare products, claiming to have similar efficacy to over-the-counter vitamin A derivative products. The manufacturers use clinical trial data to support the claims that bakuchiol has anti-aging properties. This commentary critically appraises these clinical trials. Dermatologists need to be aware of and clinically appraise evidence for these types of cosmetic ingredients in order to provide accurate recommendations to their patients and the consumer. The integrity of our profession and the well-being of our patients depend on it.

Effectiveness of recombinant human granulocyte macrophage colony-stimulating factor for treating deep second-degree burns: a systematic review and meta-analysis

BMJ military health; Oct 2020; vol. 166 (no. 5); p. 352-357
Li J, et al.

Introduction: It is uncertain whether treatment by recombinant human granulocyte macrophage colony-stimulating factor (rhGM-CSF) can promote healing of deep second-degree burns. This meta-analysis aimed to systematically review and assess randomised controlled trials (RCTs) that investigated the efficacy and safety of rhGM-CSF for treating deep second-degree burns. Methods): This meta-analysis conformed to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Statement. The PubMed, Cochrane Library, Medline and Embase databases and relevant references were systematically searched for RCTs (published up to November 2019). Main outcome measures included the wound healing rate, wound healing time and average optical densities of the vascular endothelial growth factor (VEGF) and fibroblast growth

factor (FGF). We performed a meta-analysis using fixed or random effects models. RESULT(S): Seven RCTs comprising 982 patients with 1184 burns (652 patients received rhGM-CSF vs 532 controls) were included. Compared with standard wound care alone, the use of rhGM-CSF significantly reduced wound healing time by 4.77 days (weighted mean difference=-4.77; 95% CI -6.45 to -3.09; p<0.001) and significantly increased the wound healing rate on days 7, 10, 14 and 20 by 6.46%, 19.78%, 17.07% and 11.38%, respectively. There was no significant difference between the groups in the wound healing rate on day 28 and average optical densities of VEGF and FGF. No systematic adverse event occurred. Redder, more swollen and painful wounds were reported after using rhGM-CSF compared with the control. Conclusion: rhGM-CSF could be effective and safe for treating deep second-degree burns.

Self-administered daylight-activated photodynamic therapy for the treatment of hand eczema: a prospective proof-of-concept study

Dermatologic therapy; Sep 2020
Kremer N, et al.

Photodynamic therapy (PDT), traditionally used in patients with nonmelanoma skin cancer, has been found to be effective for various inflammatory skin conditions. Daylight-activated PDT (DL-PDT), in which the sun serves as the light source, is substantially less painful than conventional PDT. To determine the safety and efficacy of DL-PDT in a series of patients with chronic hand eczema (CHE). A proof-of-concept prospective design was used. Eight patients diagnosed with CHE at a tertiary dermatology clinic underwent DL-PDT. The first treatment was administered at the clinic and subsequent treatments (up to 4 total) were self-administered at home at 2-week intervals. Outcome was evaluated with the Investigator Global Assessment (IGA) (score 0-4), Dermatology Life Quality Index (DLQI) (score 0-24), and blinded review of clinical photos (graded on a quartile scale by percent improvement). There were 6 male and 2 female patients of mean age 35years. All underwent at least 3 treatments. The IGA score improved by 2.5 points at 1month, 2.7 at 3months, and 2.2 at 6months post-treatment, and the DLQI score improved by 7.9, 6.6, and 6.1 points, respectively. Clinical photo grades improved by 2.9 points at 3months. Side effects were mild and transient. All patients had some degree of recurrence 6months after treatment. The self-administered DL-PDT is easy to perform, moderately effective, and safe for use in patients with CHE. Repeated treatments might be required to maintain remission.

Weight gain in patients with severe atopic dermatitis treated with dupilumab: a cohort study

BMC dermatology; Sep 2020; vol. 20 (1); p. 8
Johansson EK, et al.

Background: Dupilumab, targeting the interleukin-4alpha receptor and inhibiting the action of interleukin-4 and interleukin-13, was recently approved for treatment of moderate to severe atopic dermatitis. There is limited data on long-term effects and safety among patients with severe atopic dermatitis treated with dupilumab. Weight gain was observed among patients treated with dupilumab in our clinic. The aim was to describe weight change in a cohort study of patients with severe atopic dermatitis treated with dupilumab from baseline to follow-up after 12months, and to analyze if weight change was associated with effect of treatment, reported appetite, and/or disturbed night sleep due to itching. Methods: All patients with atopic dermatitis receiving systemic treatment at the Unit of Dermatology, Karolinska University Hospital, have been registered and monitored consecutively since January 2017. This cohort constituted all patients who started treatment on dupilumab or methotrexate between 10 January 2017 and 30 June 2019 with at least 6months of follow-up within the study period. The following variables were monitored at start of and during treatment: Eczema Severity Score Index, Patient-Oriented Eczema Measure, visual analogue scale for pruritus 10cm, Montgomery-Asberg Depression Rating Scale, Dermatology Life Quality Index, and weight. Data analyses were performed using two-

sample Wilcoxon-Mann-Whitney rank-sum test, or the Wilcoxon matched-pairs sign-rank test with a p-value <0.05 considered as statistically significant. RESULT(S): Patients treated with dupilumab (n=12) gained weight (mean 6.1kg, range [0.1-18.0], p=0.002) after 1 year on treatment. The majority of patients showed a good response to treatment with dupilumab (n=11); at follow-up at 6, 9, or 12months, they reached EASI-90 (n=6), EASI-75 (n=4), or EASI-50 (n=1). There was no significant association between weight gain and treatment response, reported appetite, or disturbed night-sleep due to itch. Patients treated with methotrexate showed no significant weight change (n=8). Conclusions: To our knowledge, this is the first report on a possible association between weight gain and dupilumab treatment; the extent of the association is yet to be seen, as is the mechanism behind this finding.

Diabetes

Assessment of the simultaneous effect of hypothyroidism and thyroid autoimmunity with gestational diabetes on the incidence of type 2 diabetes
BMC Endocrine Disorders; Oct 2020; vol. 20 (1)
Dolan C, Glynn R, Lawlor B.
Both type 2 diabetes (T2DM) and dementia have multifactorial etiologies. Both are associated with aging and have well-recognized lifestyle, cardiovascular and psychosocial risk factors. However, uncertainty exists in the literature with regard to: 1) the potentially modifiable risk factors common to both dementia and T2DM, and 2) the risk of brain-related complications in those with established diabetes. In this study, we address this uncertainty and inform design of a survey questionnaire to assess knowledge about diabetes and brain health among at-risk groups. This investigation consisted of a mixed-methods approach, including a Delphi consensus study preceded by a systematic literature review. The review was conducted using MEDLINE, EMBASE and Cochrane Library databases. A 2-round online Delphi study, informed by the review, invited international experts to rate their agreement with proposed risk factors and complications. Of 7,337 abstracts retrieved, 13 were included in the final review. Among 46 international experts invited to take part in the Delphi study, 14 (32%) responded. In the Delphi study, hypertension, obesity, physical inactivity and heavy alcohol consumption reached consensus as risk factors common to both T2DM and dementia. Proposed brain-related diabetes complications, depression and dementia were also identified. Results revealed expert consensus and literature review agreement on a number of common modifiable risk factors for T2DM and dementia, as well as agreement on brain-related complications of diabetes. A number of other proposed shared risk factors did not reach consensus agreement, suggesting a need for more high-quality studies to add to the evidence base.

Prevalence and correlates of diabetes distress, perceived stress and depressive symptoms among adults with early-onset Type 2 diabetes: cross-sectional survey results from the Danish DD2 study
Bo A, et al.
Diabetic Medicine; Oct 2020; vol. 37 (10); p. 1679-1687
Aims: To establish the prevalence of diabetes distress, perceived stress and depressive symptoms among adults with early-onset Type 2 diabetes, and to examine their association with socio-demographic and clinical characteristics. Methods: A cross-sectional survey was performed among individuals with Type 2 diabetes aged 20-45 years who were included in the Danish nationwide Danish Center for Strategic Research in Type 2 Diabetes cohort between 2010 and 2016. The survey assessed diabetes distress (20-item Problem Areas in Diabetes Scale), perceived stress (10-item Perceived Stress Scale) and depressive symptoms (10-item short form of the Center for Epidemiological Studies Depression Scale Revised), as well as socio-demographic characteristics. Clinical data were collected from national health registers. Results: In total, 216/460 (47%) individuals (48% women) with Type 2 diabetes completed the

survey. The median (IQR) age was 42 (38–44) years and the diabetes duration was 5 (3–7) years. In total, 24% of respondents reported high diabetes distress (Problem Areas in Diabetes Scale ≥ 40), 46% reported high perceived stress (Perceived Stress Scale ≥ 18) and 41% reported elevated symptoms of depression (Center for Epidemiological Studies Depression Scale Revised ≥ 10). The prevalence of emotional problems was higher among women than men. Diabetes distress was higher among those prescribed non-insulin glucose-lowering drugs (vs. no glucose-lowering drugs), but was not associated with other clinical or socio-demographic characteristics. High perceived stress was associated with being unemployed and using antidepressant medication, and elevated depressive symptoms were associated with low education level, unemployment, living alone, having a psychiatric disorder and using antidepressant medication. Conclusion: We found a high prevalence of emotional problems among adults with early-onset Type 2 diabetes in Denmark. Health care for this group should focus on both physical health and psychosocial circumstances and should also address general as well as diabetes-specific emotional problems. What's new?: Adults with early-onset Type 2 diabetes have an adverse risk factor profile. In Denmark, data on their psychosocial profile are needed to develop adequate health services.Almost half of 216 adults aged 20–45 years with Type 2 diabetes reported high levels of perceived stress and depressive symptoms, while a quarter reported high diabetes distress. The prevalence of emotional problems was higher among women and among some groups of lower socio-economic status.Health services should be adapted to meet life-stage specific needs in this group and to integrate psychosocial aspects into diabetes care. Gender-specific interventions may be needed.

Epilepsy

A Fast-Track Care by a Nursing Case Management Concept Improved Status Epilepticus Outcomes

Journal of Neuroscience Nursing; Aug 2020; vol. 52 (4); p. 200-204
Pranboon S, et al.
Background: Status epilepticus (SE) is an emergency neurological condition, which is life-threatening, results in high morbidity and mortality rates, and needs to be diagnosed and promptly cared for. This study aimed to develop and evaluate the SE fast-track care using a nursing case management concept on SE outcomes. Methods: Quasi-experimental study conducted in adult patients with SE admitted in 15 emergency and intensive critical/intermediate care wards. SE outcomes were evaluated and compared between preintervention and postintervention. Results: Time to treatment was reduced from 30 minutes to 3.5 minutes (P <.001). Similarly, the seizure control rate increased from 65.7% to 94.4% (P =.009). The mortality rate was reduced but did not reach statistical significance (8.6% vs 0%; P =.115). The intervention also reduced average waiting time for receiving antiepileptic drugs from the pharmacy department from 13.09 minutes to < 1 minute. Conclusion: The development of the fast-track care system for SE patients by nursing case management is at the core of management for coordinating multidisciplinary teams. This can improve outcomes by reducing the time to diagnosis and treatment time, therefore reducing mortality rates in SE patients.

Seizure outcome and use of antiepileptic drugs after epilepsy surgery according to histopathological diagnosis: a retrospective multicentre cohort study

The Lancet. Neurology; Sep 2020; vol. 19 (9); p. 748-757
Lamberink HJ, et al.
Background: Surgery is a widely accepted treatment option for drug-resistant focal epilepsy. A detailed analysis of longitudinal postoperative seizure outcomes and use of antiepileptic drugs for different brain lesions causing epilepsy is not available. We aimed to analyse the association between histopathology and seizure outcome and drug freedom up to 5 years after epilepsy surgery, to improve presurgical decision making and counselling. Methods: In this retrospective, multicentre, longitudinal, cohort study,

patients who had epilepsy surgery between Jan 1, 2000, and Dec 31, 2012, at 37 collaborating tertiary referral centres across 18 European countries of the European Epilepsy Brain Bank consortium were assessed. We included patients of all ages with histopathology available after epilepsy surgery. Histopathological diagnoses and a minimal dataset of clinical variables were collected from existing local databases and patient records. The primary outcomes were freedom from disabling seizures (Engel class 1) and drug freedom at 1, 2, and 5 years after surgery. Proportions of individuals who were Engel class 1 and drug-free were reported for the 11 main categories of histopathological diagnosis. We analysed the association between histopathology, duration of epilepsy, and age at surgery, and the primary outcomes using random effects multivariable logistic regression to control for confounding.FINDINGS9147 patients were included, of whom seizure outcomes were available for 8191 (89·5%) participants at 2 years, and for 5577 (61·0%) at 5 years. The diagnoses of low-grade epilepsy associated neuroepithelial tumour (LEAT), vascular malformation, and hippocampal sclerosis had the best seizure outcome at 2 years after surgery, with 77·5% (1027 of 1325) of patients free from disabling seizures for LEAT, 74·0% (328 of 443) for vascular malformation, and 71·5% (2108 of 2948) for hippocampal sclerosis. The worst seizure outcomes at 2 years were seen for patients with focal cortical dysplasia type I or mild malformation of cortical development (50·0%, 213 of 426 free from disabling seizures), those with malformation of cortical development-other (52·3%, 212 of 405 free from disabling seizures), and for those with no histopathological lesion (53·5%, 396 of 740 free from disabling seizures). The proportion of patients being both Engel class 1 and drug-free was 0-14% at 1 year and increased to 14-51% at 5 years. Children were more often drug-free; temporal lobe surgeries had the best seizure outcomes; and a longer duration of epilepsy was associated with reduced chance of favourable seizure outcomes and drug freedom. This effect of duration was evident for all lesions, except for hippocampal sclerosis. Interpretation: Histopathological diagnosis, age at surgery, and duration of epilepsy are important prognostic factors for outcomes of epilepsy surgery. In every patient with refractory focal epilepsy presumed to be lesional, evaluation for surgery should be considered. Funding: None.

Respiratory Conditions

Dupilumab improves asthma control and lung function in patients with insufficient outcome during previous antibody therapy

The journal of allergy and clinical immunology. In practice; Sep 2020
Mummler C, et al.
Background: Biological treatments directed against IgE and IL5 have largely improved outcomes for patients with severe type-2 high asthma. However, a fraction of severe asthmatics shows insufficient treatment outcome under anti-IgE and anti-IL5/anti-IL5 receptor alpha (anti-IL5Ralpha) antibodies. Objectives: To evaluate whether switching to dupilumab was of benefit in patients with insufficient outcome under previous anti-IgE or anti-IL5/IL5Ralpha therapy. Methods: We retrospectively analyzed 38 patients that were switched to dupilumab from a previous anti-IgE or anti-IL5/IL5Ralpha medication due to insufficient outcome. We defined response criteria after 3-6 months as an improvement in at least one of the following criteria without deterioration in the other criteria, comparing values under dupilumab to values under previous antibody: 1.increase in asthma control test (ACT) >= 3, 2.reduction in oral corticosteroid (OCS) dose>=50%, 3.FEV1 improvement>=150ml, and classified patients in responders and non-responders. RESULT(S): Switch to dupilumab led to a response in 76% of patients. In the total cohort, ACT score increased by a mean of 2.9 ($p<0.0001$), while exacerbations decreased significantly ($p<0.0001$) and number of OCS dependent patients decreased from 15 to 12. Mean FEV1 improved of 305ml ($p<0.0001$). Median FeNO decreased by -30ppb ($p<0.0001$), while eosinophil counts increased by 0.17G/l ($p<0.01$). There were no significant differences in clinical characteristics between

responders and non-responders to dupilumab. However, patients with increased FeNO (>=25ppb) during previous antibody were more often responders than patients with low FeNO (<25ppb) (p<0.05). Conclusion: Altogether, we show that a switch to dupilumab in patients with insufficient outcome under previous biological therapy was effective in the majority of patients.

Impact of air pollution on asthma outcomes

International Journal of Environmental Research and Public Health; Sep 2020; vol. 17 (17); p. 1-29
Tiotiu AI, et al.

Asthma is a chronic respiratory disease characterized by variable airflow obstruction, bronchial hyper responsiveness, and airway inflammation. Evidence suggests that air pollution has a negative impact on asthma outcomes in both adult and pediatric populations. The aim of this review is to summarize the current knowledge on the effect of various outdoor and indoor pollutants on asthma outcomes, their burden on its management, as well as to highlight the measures that could result in improved asthma outcomes. Traffic-related air pollution, nitrogen dioxide and second-hand smoking (SHS) exposures represent significant risk factors for asthma development in children. Nevertheless, a causal relation between air pollution and development of adult asthma is not clearly established. Exposure to outdoor pollutants can induce asthma symptoms, exacerbations and decreases in lung function. Active tobacco smoking is associated with poorer asthma control, while exposure to SHS increases the risk of asthma exacerbations, respiratory symptoms and healthcare utilization. Other indoor pollutants such as heating sources and molds can also negatively impact the course of asthma. Global measures, that aim to reduce exposure to air pollutants, are highly needed in order to improve the outcomes and management of adult and pediatric asthma in addition to the existing guidelines.

Obesity and asthma

Journal of Allergy and Clinical Immunology; Oct 2020; vol. 146 (no. 4); p. 685-693
Miethe S, et al.

Obesity has been well recognized as an important comorbidity in patients with asthma, representing a unique phenotype and endotype. This association indicates a close relationship between metabolic and inflammatory dysregulation. However, the detailed organ-organ, cellular, and molecular interactions are not completely resolved. Because of that, the relationship between obesity and asthma remains unclear. In this article, clinical and epidemiological studies, as well as data from experimental animal work, are being summarized to provide a state of the art update on this important topic. Much more work is needed, particularly mechanistic, to fully understand the interaction between obesity and asthma and to develop novel preventive and therapeutic strategies.

Response of patients with chest tightness variant asthma with routine asthma treatment regimen: A 1-year multicenter, prospective, real-world study

Clinical and Translational Medicine; Sep 2020; vol.10(5)
Yan F, et al.

Background: Asthmatic patients with chest tightness as their only presenting symptom (chest tightness variant asthma [CTVA]) have clinical characteristics of eosinophilic airway inflammation similar to those of classic asthma (CA); however, whether CTVA has similar response to antiasthma treatment as compared with CA remains unclear. Objective(s): The response of 76 CTVA patients to standard asthma treatments with inhaled corticosteroids with long-acting beta-agonists was explored in a 52-week multicenter, prospective, real-world study. Result(s): After 52 weeks of treatment with therapy regimens used for CA, the mean 5-point Asthma Control Questionnaire (ACQ-5) score decreased markedly from 1.38(first administration) to 0.71 (52 weeks, mean decrease: 0.674, 95%CI: 0.447-0.900, P<.001).The mean asthma quality-of-life

questionnaire (AQLQ) score increased from 5.77 (first administration) to 6.20 (52 weeks, mean increase: 0.441, 95% CI 0.258-0.625, P<.001). Furthermore, at week 52, FVC, FEV1%, the diurnal variation in PEFand the PD20-FEV1 were significantly improved. Subgroup analysis revealed that the patients at first administration in the responsive group had higher ACQ-5 scores than those in the nonresponsive group (P <.05). Conclusion(s): In conclusion, patients with CTVA had a good therapeutic response to the guideline-recommended routine treatment (containing inhaled corticosteroids). The association between the treatment response and the severity of CTVA suggested that CTVA patients with higher ACQ-5 scores had better therapeutic effects.

SMART and as-needed therapies in mild to severe asthma: A network meta-analysis

European Respiratory Journal; Sep 2020; vol. 56 (no. 3)
Rogliani P, et al.
To date there are no network meta-analyses comparing the impact of as-needed treatments in asthma, including the single maintenance and reliever therapy (known as SMART or MART - for simplicity SMART will be used hereafter) and the use of inhaled corticosteroid (ICS)/long-acting beta2-agonist (LABA) combination exclusively on an as-needed basis. Therefore, we performed a systematic review and network meta-analysis concerning the efficacy and safety of SMART and as-needed therapies in asthma. Data of 32096 asthmatic patients were extracted from 21 studies, lasting from 6 to 12 months. In adult mild to moderate asthmatic patients low-dose (LD) SMART and as-needed LD ICS/LABA combination were significantly (relative effect <0.78, P<0.05) more effective than the other as-needed therapies in reducing the risk of exacerbation, and both were ranked as the first treatment option reaching the first quartile of the surface under the cumulative ranking curve analysis (SUCRA). In adult moderate to severe asthmatic patients LD to medium-dose (MD) SMART and high-dose (HD) ICS/LABA + as-needed short-acting beta2-agonist were equally effective in reducing the risk of severe asthma exacerbation (P>0.05), although only LD to MD SMART was ranked as the first treatment option (first SUCRA quartile). Overall, these treatments were well tolerated and effective also on lung function and disease control. This study supports SMART and as-needed therapies as a suitable therapeutic option for asthma, by providing the most effective positioning of each specific treatment according to the disease severity.

Use of hyaluronic acid (HA) in chronic airway diseases

Cells; Oct 2020; vol. 9 (no. 10); p. 1-18
Carro L.M.; Martinez-Garcia M.A.
Hyaluronic acid (HA) is a key component of the extracellular matrix of the lungs. A unique attribute of HA is its water-retaining properties, so HA has a major role in the regulation of fluid balance in the lung interstitium. Hyaluronic acid has been widely used in the treatment of eyes, ears, joints and skin disorders, but in the last years, it has been also proposed in the treatment of certain lung diseases, including airway diseases, due to its anti-inflammatory and water-binding capacities. Hyaluronic acid aerosol decreases the severity of elastase-induced emphysema in murine models, prevents bronchoconstriction in asthmatics and improves some functional parameters in chronic obstructive pulmonary disease (COPD) patients. Due to the protection of HA against bronchoconstriction and its hydration properties, inhaled HA would increase the volume of airway surface liquid, resulting in mucus hydration, increased mucous transport and less mucous plugging of the airways. In addition, it has been seen in human studies that the treatment with nebulised HA improves the tolerability of nebulised hypertonic saline (even at 6% or 7% of concentration), which has been demonstrated to be an effective treatment in bronchial secretion management in patients with cystic fibrosis and bronchiectasis. Our objective is to review the role of HA treatment in the management of chronic airway diseases.

Rheumatology

Applying cascaded convolutional neural network design further enhances automatic scoring of arthritis disease activity on ultrasound images from rheumatoid arthritis patients.

Annals of the Rheumatic Diseases; Sep 2020; vol. 79 (9); p. 1189-1193
Christensen ABH, et al.
Objectives: We have previously shown that neural network technology can be used for scoring arthritis disease activity in ultrasound images from rheumatoid arthritis (RA) patients, giving scores according to the EULAR-OMERACT grading system. We have now further developed the architecture of this neural network and can here present a new idea applying cascaded convolutional neural network (CNN) design with even better results. We evaluate the generalisability of this method on unseen data, comparing the CNN with an expert rheumatologist. Methods: The images were graded by an expert rheumatologist according to the EULAR-OMERACT synovitis scoring system. CNNs were systematically trained to find the best configuration. The algorithms were evaluated on a separate test data set and compared with the gradings of an expert rheumatologist on a per-joint basis using a Kappa statistic, and on a per-patient basis using a Wilcoxon signed-rank test. Results: With 1678 images available for training and 322 images for testing the model, it achieved an overall four-class accuracy of 83.9%. On a per-patient level, there was no significant difference between the classifications of the model and of a human expert (p=0.85). Our original CNN had a four-class accuracy of 75.0%.Conclusions: Using a new network architecture we have further enhanced the algorithm and have shown strong agreement with an expert rheumatologist on a per-joint basis and on a per-patient basis. This emphasises the potential of using CNNs with this architecture as a strong assistive tool for the objective assessment of disease activity of RA patients.

Fatigue and associated factors in a multi-ethnic cohort of rheumatoid arthritis patients

International Journal of Rheumatic Diseases; Aug 2020; vol. 23 (8); p. 1088-1093
Lee HJ, et al.
Introduction: Fatigue is an important yet infrequently evaluated component in patients with rheumatoid arthritis (RA) and may have a major impact on quality of life. Objective(s): To evaluate fatigue, identify factors associated with fatigue and assess the effect of fatigue on health-related quality of life (HRQoL) in a multi-ethnic cohort of RA patients. Method(s): A cross-sectional study was performed in patients who fulfilled European League Against Rheumatism/ American College of Rheumatology 2010 criteria for RA. Functional Assessment of Chronic Illness Therapy - Fatigue (FACIT-F) questionnaire was used to assess fatigue. Potential factors for fatigue were categorized into RA-related (gender, seropositivity [rheumatoid factor and/or anti-citrullinated protein antibody], disease duration, visual analog scale pain score, Disease Activity Score of 28 joints - erythrocyte sedimentation rate [DAS28-ESR], ESR, hemoglobin level, functional disability [Health Assessment Questionnaire - Disability Index, HAQ-DI score], EQ-5D-3L, concomitant prednisolone use and number of conventional synthetic disease-modifying anti-rheumatic drugs [csDMARDs] used) and non-RA-related (age, body mass index, ethnicity and number of co-morbidities). Result(s): A total of 214 patients (86.9% female) were included; the median age was 62 (25-91) years and 67.3% were seropositive. Seventy-six (33.5%) patients had moderate disease activity, 12 (5.6%) had high disease activity and 152 (71%) patients had mild difficulties to moderate disability HAQ-DI scores. Median of total FACIT-F score was 113.2 (36.3-160.0). Joint factors of younger age, longer disease duration, higher HAQ score (increased functional disability), and lower EQ-5D (poorer HRQoL) were significantly associated with higher levels of fatigue (all P <.02). Conclusion(s): Fatigue was associated with functional disability and has a significant impact on HRQoL in RA. Fatigue assessment should be considered in routine clinical practice for RA patients.

Perspectives of Patients with Rheumatic Diseases in the Early Phase of COVID-19

Arthritis Care and Research; Sep 2020; vol. 72 (9); p. 1189-1195
Antony A, et al.
Objective: To determine health perceptions of patients with rheumatic diseases in the early phase of the coronavirus disease 2019 (COVID-19) pandemic. Method(s): Rheumatology patients at a single center received via text message the Australian Rheumatology Association COVID-19 information sheet and an invitation to participate in a deidentified survey. Patient concerns regarding risks conferred by their rheumatologic disease or medications, impact of receiving the information sheet on the likelihood of staying on medication, and acceptance of telehealth were ascertained. Result(s): A total of 2,630 patients received the text message, and the survey response rate was 21% (n = 550). The mean +/- SD age of the participants was 52 +/- 15.2 years, and 75.3% were female. Participants' highest ranked concern was that their medications would increase the severity of their COVID-19 symptoms (76.1%). The highest levels of concern were seen in patients taking combination conventional synthetic disease-modifying ant rheumatic drugs (DMARDs) and/or a biologic/targeted synthetic DMARD. There was no association between prednisolone dose and concern. While 63% of patients planned to continue their ant rheumatic medications, a further 30% were more likely to continue taking their medications because of receiving the information. Telehealth was acceptable to 98.4% of patients, but 28.1% felt this was only appropriate while infection control measures were in place. Conclusion(s): Concerns regarding the risk of COVID-19 among patients taking ant rheumatic drugs are common. Proactive dissemination of information is needed to address misconceptions related to medication risk, improve medication adherence, and minimize the risk of flares. Telehealth is acceptable to most patients during the COVID-19 pandemic.

A systematic review highlights the need to improve the quality and applicability of trials of physical therapy interventions for low back pain.

Journal of clinical epidemiology; Oct 2020; vol. 126; p. 106-115
Cashin AG, et al.
Objectives: The objective of this study was to review and assess the methodological quality of randomized controlled trials that test physical therapy interventions for low back pain. Study design and setting: This is a systematic review of trials of physical therapy interventions to prevent or treat low back pain (of any duration or type) in participants of any age indexed on the Physiotherapy Evidence Database (PEDro). Existing PEDro scale ratings were used to evaluate methodological quality. Results: This review identified 2,215 trials. The majority of trials were for adults (n = 2136, 96.4%), low back pain without specific etiology (n = 1,863, 84.1%), and chronic duration (n = 947, 42.8%). The quality of trials improved over time; however, most were at risk of bias. Less than half of the trials concealed allocation to intervention (n = 813, 36.7%), used intention-to-treat principles (n = 778, 35.1%), and blinded assessors (n = 810, 36.6%), participants (n = 174, 7.9%), and therapists (n = 39, 1.8%). These findings did not vary by the type of therapy. Conclusion: Most trials that test physical therapy interventions for low back pain have methodological limitations that could bias treatment effect estimates. Greater attention to methodological features, such as allocation concealment and the reporting of intention-to-treat effects, would improve the quality of trials testing physical therapy interventions for low back pain.

We actively welcome any feedback or comments on this bulletin, contact details below.

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