Hot Articles

“February | 2019”

Health Science
Abstract

Introduction: Glioblastoma (GBM) is a highly aggressive brain tumor and is one of the most lethal human cancers. Chimeric antigen receptor (CAR) T cell therapy has markedly improved survival in previously incurable disease; however, this vanguard treatment still faces challenges in GBM. Likewise, checkpoint blockade therapies have not enjoyed the same victories against GBM. As it becomes increasingly evident that a mono-therapeutic approach is unlikely to provide anti-tumor efficacy, there evolves a critical need for combined treatment strategies.

Areas covered: This review highlights the clinical successes observed with CAR T cell therapy as well the current efforts to overcome its perceived limitations. The review also explores employed combinations of CAR T cell approaches with immune checkpoint blockade strategies, which aim to potentiate immunotherapeutic benefits while restricting the impact of tumor heterogeneity and T cell exhaustion.

Expert Opinion: Barriers such as tumor heterogeneity and T cell exhaustion have exposed the weaknesses of various mono-immunotherapeutic approaches to GBM, including CAR T cell and checkpoint blockade strategies. Combining these potentially complementary strategies, however, may proffer a rational means of mitigating these barriers and advancing therapeutic successes against GBM and other solid tumors.

Database

Taylor & Francis Online Journals
Understanding the role of the physiatrist and how to improve the continuum of care for trauma patients: a qualitative study

Sander L. Hitzig, Lesley Gotlib Conn, Sara J. T. Guilcher, Stephanie R. Cimino & Lawrence R. Robinson

Disability and Rehabilitation

Published online: 04 Feb 2020

https://doi.org/10.1080/09638288.2020.1719215

Abstract

Purpose: Transitions across care settings can be stressful for trauma patients, and when poorly executed, can lead to poor outcomes. Early physical medicine and rehabilitation (PM&R) consults in acute care settings can optimize the continuum of care for trauma patients, but there is a need for additional insight on its impact. This study aimed to better understand how early PM&R consults influence the continuum of care between acute and rehabilitation trauma settings.

Methods: Four focus groups were conducted with 21 trauma acute care and rehabilitation staff, and data were analyzed via content analysis.

Results: The main themes identified were: (1) patient-level considerations (i. readiness for rehab [mental health]; ii. patient education and expectations for rehab); (2) clinical-team considerations (i. physiatry role clarity and role limitations; ii. access and accuracy of information; iii. departmental silos); and (3) system-level considerations (i. occupancy and discharge pressures; ii. inter-facility coordination and patient flow).

Conclusions: Although both acute and rehabilitation care staff find early PM&R consults as being important to support the recovery of trauma patients, there is a need for greater role clarity of the physiatrist across settings and a more refined implementation approach to better meet the communication needs of clinical staff.

Database

Taylor & Francis Online Journals
Abstract

Introduction: Advanced melanoma has recently been transformed by the advent of immune checkpoint inhibitors. These agents have altered the prognosis of this disease from a median survival of <1 year to recent data showing a 5-year survival surpassing 50%. Combination regimens combining PD-1 and CTLA-4 blockade are associated with superior response and progression-free survival at the cost of increased toxicities.

Areas covered: In this review, we discuss the clinical and investigational utility of predictive biomarkers of immune checkpoint inhibitor treatment in melanoma. Topics include tumor-intrinsic biomarkers, tumor microenvironment biomarkers, and host characteristic biomarkers. We also discuss biomarkers of immune-related adverse events and how biomarkers may be used to personalize the selection of immune checkpoint inhibition in patients.

Expert opinion: The decisions confronting oncologists when choosing treatment are increasing in complexity. Biomarkers may aid in these treatment decisions and are growing in importance.
Abstract

Vascular smooth muscle cells (VSMCs) is one of the main intracellular components of the blood vessel wall. The abnormalities of VSMCs participate in the development of cardiovascular diseases such as atherosclerosis, hypertension, and restenosis, especially the formation and stability of atherosclerotic plaques. Autophagy is involved in the regulation of proliferation, migration and phenotype switching of VSMCs, which in turn affects the pathological process of atherosclerosis. However, the autophagy of VSMCs has a dual effect on cells survival. Autophagy is induced in VSMCs by various stimuli such as 7-ketocholesterol (7-KC), unsaturated lipid peroxidation-derived aldehyde and excess free cholesterol, thereby promoting VSMCs survival and stabilising atherosclerotic plaque. Conversely, autophagy caused by factors such as osteopontin (OPN), angiotensin II (Ang II) and nicotine can accelerate the death of VSMCs, further accelerating atherosclerotic lesions. In addition, mitophagy and lipophagy as selective autophagy are also involved in the outcome of VSMCs as well as progression of atherosclerotic lesion. Currently, there are only a few drugs available to induce VSMCs autophagy, such as atorvastatin, telmisartan and so on. Due to the important role of VSMCs autophagy in the progression of atherosclerosis plaques, drugs that directly target autophagy of VSMCs are urgently needed to be developed.

Database

Taylor & Francis Online Journals
OBJECTIVE. The objective of our study was to assess whether secretin improves visualization of a nondilated pancreatic duct and whether it increases identification of variant duct anatomy on MRCP in pediatric patients.

MATERIALS AND METHODS. This study is a delayed retrospective review of MRCP images that were prospectively obtained of 50 volunteers without a history of pancreatic disease who ranged in age from 6 to 15 years old. MRCP images (coronal 3D fast recovery fast spin-echo [FSE] and coronal single-shot FSE fat-saturated sequences) obtained before and after secretin administration were separated for review by three radiologists (reviewers 1–3). The reviewers were blinded to the purpose of the study and to secretin administration. Reviewers ranked subjective image quality (Likert scale, 1–5 points) and reported pancreaticobiliary duct anatomy and duct visibility (yes or no). Paired t tests were used for comparison of means, and the chi-square test or Fisher exact test was used for comparison of frequencies. Sensitivity and specificity of MRCP images obtained before secretin administration were judged against MRCP images obtained after secretin administration as the reference standard.

RESULTS. The frequency of image quality scores of 4 or greater assigned to 3D MRCP images was statistically significantly greater after secretin administration for reviewer 2 (p < 0.0001) and reviewer 3 (p = 0.005) and approached statistical significance for reviewer 1 (p = 0.052). Mean number of visible pancreatic duct segments (head and uncinate, body, tail) was significantly greater on the MRCP images obtained after secretin administration than on those obtained before secretin administration for all reviewers (reviewer 1, 1.9 vs 1.3; reviewer 2, 1.9 vs 1.2; reviewer 3, 1.4 vs 0.8; all, p < 0.01). For all three reviewers, the sensitivity of MRCP images obtained before secretin administration was poor for variant pancreatic ductal anatomy (reviewer 1, 37.5%; reviewer 2, 50.0%; reviewer 3, 40.0%).

CONCLUSION. Secretin administration improved subjective MRCP image quality, improved subjective visualization of the pancreatic duct, and provided greater sensitivity for anatomic variants such as pancreas divisum in a cohort of children with nondilated pancreatic ducts.
Abstract
Neoadjuvant chemotherapy induces metastasis of residual breast cancers through activation of tumor-associated macrophages. Previous studies have indicated that calcium channel blockers (CCBs) exert anti-inflammatory and antimigratory effects on macrophages via attenuating Ca2+ entry into macrophages. However, no existing empirical research has addressed the relationship between previous CCB use and breast cancer recurrence. In this study, 4840 Taiwanese women aged ≥20 years with breast cancer who underwent breast surgery from January 1, 2007, to December 31, 2015, were enrolled. The date of cancer recurrence was defined as the index date. Logistic regression was performed to evaluate the relationship between previous CCB exposure and cancer recurrence among female patients who underwent surgery for breast cancer. After adjusting for demographic characteristics, comorbidities, and tumor-node-metastasis stage, the adjusted odds ratio (OR) for CCB exposure within 5 years before the index date in women with recurrence compared with nonrecurrent controls was 0.73 (95% confidence interval [CI], 0.53–0.97). Further analysis revealed that the adjusted OR for CCB exposure between the surgery and index dates in women with recurrence relative to nonrecurrent controls was 0.72 (95%CI, 0.66–0.95). In particular, prior CCB use was significantly associated with a lower risk (34%) of breast cancer recurrence among women 20 to 54 years old (OR, 0.66; 95%CI, 0.47–0.83). This study uncovered a protective association between previous CCB use and breast cancer recurrence.
Abstract

Tumor microenvironment is known to play important roles in tumor progression. Many therapies, targeting the tumor microenvironment, are designed and applied in the clinic. One of these approaches is in situ antitumor therapy. This way, bacteria, antibodies, plasmid DNA, viruses, and cells are intratumorally delivered into the tumor site as “in-situ antitumor vaccine,” which seeks to enhance immunogenicity and generate systemic T cell responses. In addition, this intratumoral therapy can alter the tumor microenvironment from immunosuppressive to immunostimulatory while limiting the risk of systemic exposure and associated toxicity. Contemporarily, promising preclinical results and some initial success in clinical trials have been obtained after intratumoral therapy.
Abstract

Objectives
Acute pancreatitis (AP) is an inimical disorder associated with overall mortality rates between 10‐15%. It is a disorder of the exocrine pancreas which is characterized by local and systemic inflammatory responses primarily driven by oxidative stress and death of pancreatic acinar cells. The severity of AP ranges from mild pancreatic edema with complete recuperative possibilities to serious systemic inflammatory response resulting in peripancreatic/pancreatic necrosis, multiple organ failure, and death.

Key findings
We have retrieved the potential alternative approaches that are developed lately for efficacious treatment of AP from the currently available literature and recently reported experimental studies. This review summarizes the need for alternative approaches and combinatorial treatment strategies to deal with AP based on literature search using specific key words in PubMed and ScienceDirect databases.

Summary
Since AP results from perturbations of multiple signaling pathways, the so called “monotargeted smart drugs” of the past decade is highly unlikely to be effective. Also, the conventional treatment approaches were mainly involved in providing palliative care instead of curing the disease. Hence, many researchers are beginning to focus on developing alternate therapies to treat AP effectively. This review also summarizes the recent trends in the combinatorial approaches available for AP treatment.

Database
Wiley Online Library
Title: Attitudes of pharmacy and non-pharmacy students towards mental illness in Nigeria: a comparative survey

Author: Chibueze Anosike, Chinwe Victoria Ukwe, Azuka Cyriacus Oparah

Journal: International Journal of Pharmacy Practice

Volume: Version of Record online:04 February 2020

Doi: https://doi.org/10.1111/ijpp.12601

Abstract

Objectives
Globally, persons with mental illness are victims of stigma, even among healthcare professionals and trainees. However, in Nigeria, little is known about the attitudes of pharmacy students towards people with mental illness. Therefore, the objectives of this paper were to assess and compare the attitudes of pharmacy and non-pharmacy students towards mental illness and explore its associated demographic factors.

Methods
A cross-sectional survey was conducted among pharmacy and selected non-pharmacy students of a Nigerian university. The Attitude Scale for Mental Illness was used for data collection. The survey instrument was distributed to and completed by selected students in batches after normal class lectures. Descriptive statistics, chi-square test and Student’s t-test were used for data analysis. P < 0.05 was considered statistically significant.

Key findings
The key findings showed that pharmacy and non-pharmacy students generally demonstrated positive attitudes towards mental illness. Pharmacy students had more positive, less stigmatizing attitudes compared with students of non-pharmacy courses. Students’ attitudes towards mental illness were significantly influenced by gender, age, a previous visit to a mental hospital and knowing a family member or friend with a mental illness.

Conclusions
Our findings suggest that students’ attitudes towards mental illness were positive but sub-optimal. Student pharmacists demonstrated more positive attitudes towards mental illness compared with non-pharmacy students. However, the major contributors to positive attitudes were male gender, older age, a previous visit to a mental hospital and having a close associate with a mental illness. Therefore, educational interventions addressing students’ misconceptions of mental illness are recommended.

Database
Wiley Online Library
Abstract

Population obesity and associated morbidities pose significant public health and economic burdens in the United Kingdom, United States, and globally. As a response, public health initiatives often seek to change individuals’ unhealthy behavior, with the dual aims of improving their health and conserving health care resources. One such initiative—taxes on sugar-sweetened beverages—has sparked considerable ethical debate. Prominent in the debate are arguments seeking to demonstrate the supposed impermissibility of SSB taxes and similar policies on the grounds that they interfere with individuals’ freedom and autonomy. Commentators have often assumed that a policy intended to restrict or change private individuals’ consumption behavior will necessarily curtail freedom and, as a corollary, will undermine individuals’ autonomy with respect to their consumption choices. Yet this assumption involves a conceptual mistake. To address the misunderstanding, it’s necessary to attend to the differences between negative liberty, freedom of options, and autonomy. Ultimately, concerns about negative liberty, freedom, and autonomy do not provide strong grounds for opposing SSB taxes.

Database

Wiley Online Library