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Cysts are common incidental findings of advanced imaging tests, and can occur almost anywhere in the body. Specific imaging features allow for a confident diagnosis of a cyst without further testing. Avoiding unnecessary follow-up in these cases may help reduce overutilization of medical imaging and lessen anxiety for the patient.

17 **Headache**

Paul Rizzoli and William J. Mullally

Headaches are one of the most common complaints encountered in medicine and neurology. This review discusses the current diagnosis, classification, and management of headache disorders, with a focus on migraines, tension-type headaches, trigeminal autonomic cephalgias, and other types of headache.

25 **Infections of the Nervous System**

Seth N. Levin and Jennifer L. Lyons

Neurologic infections can cause significant morbidity and mortality. The spread of new pathogens and reemergence of opportunistic infections further complicate management. General practitioners should approach all infections using a basic framework including neuroanatomical location, immune status, and other demographic features in order to facilitate early and precise diagnosis.

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48 **Dietary Patterns and Long-Term Survival: A Retrospective Study of Healthy Primary Care Patients**

Nilay S. Shah, David Leonard, Carrie E. Finley, Fatima Rodriguez, Ashish Sarraju, Carolyn E. Barlow, Laura F. DeFina, Benjamin L. Willis, William L. Haskell, and David J. Maron

Dietary patterns have been linked to chronic disease risk factors; but are they associated with long-term survival in a middle-aged, healthy population? This research suggests that promotion of a healthy dietary pattern should begin in middle age, before the development of comorbid risk factors, since eating patterns in middle age may influence outcomes decades later.

56 **Differences in Associations of Antidepressants and Hospitalization Due to Hyponatremia**

Shermineh Farmand, Jonatan D. Lindh, Jan Calissendorff, Jakob Skov, Henrik Falhammar, David Nathanson, and Buster Mannheimer

This study investigates the association between different groups of antidepressants and the risk of hospitalization due to hyponatremia. In patients with clinically significant hyponatremia undergoing newly initiated treatment with SSRIs, alternative treatment should be considered. In patients with ongoing antidepressant treatment, other causes of hyponatremia should be explored.

64 **Opioid Drug Use and Acute Cardiac Events Among Pregnant Women in the United States**

Hamisu M. Salihu, Jason L. Salemi, Anjali Aggarwal, Beverly F. Steele, Ross C. Pepper, Mulubrhan F. Mogos, and Muktar H. Aliyu

Over the previous decade opioid use during pregnancy increased significantly, in parallel with the rise in the incidence of acute cardiac events in pregnancy and childbirth. Prevention of acute cardiac events requires close monitoring of high-risk patients, timely recognition of signs of deterioration, and preparedness to act quickly when signs and symptoms arise. An effective national policy is needed to address this emerging public health challenge.

72 **Hospital-Associated Hypernatremia Spectrum and Clinical Outcomes in an Unselected Cohort**

Evangelos Tsiptotis, Lori Lyn Price, Bertrand L. Jaber, and Nicolaos E. Madias

In this study of unselected hospitalized adults, all forms of hypernatremia were associated with in-hospital mortality and heightened resource use. Improvements in medical education and systems of care might decrease the incidence of hospital-acquired and hospital-aggravated hypernatremia.

83 **Celiac Disease and Increased Risk of Pneumococcal Infection: A Systematic Review and Meta-Analysis**

Malorie Simons, Lori A.J. Scott-Sheldon, Yesenia Risech-Neyman, Steven F. Moss, Jonas F. Ludvigsson, and Peter H.R. Green

Patients with celiac disease are at increased risk for pneumococcal infection, particularly those who were not vaccinated in childhood or as older adults. Preventive pneumococcal vaccination should be considered for those with celiac disease, with special attention to those aged 15-64 years who have not received pneumococcal vaccination as a child.

90 Decreasing *Clostridium difficile*-Associated Fatality Rates Among Hospitalized Patients in the United States: 2004-2014

Manish P. Shrestha, Christian Bime, and Sasha Taleban

*In the decade from 2004 to 2014, in-hospital fatality rates among patients with *C. difficile* infection decreased, despite increasing infection rates. This decline in fatality was particularly noticeable in older patients. Despite decreasing length of stay, however, the economic burden of *C. difficile* infection remains high.*

97 Inferior Vena Cava Filters in Stable Patients with Acute Pulmonary Embolism Who Receive Thrombolytic Therapy

Paul D. Stein, Fadi Matta, and Mary J. Hughes

Among stable patients with acute pulmonary embolism who receive thrombolytic therapy, irrespective of the reason, the additional use of an inferior vena cava filter results in a lower in-hospital mortality.



AJM ONLINE

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DIAGNOSTIC DILEMMA

e1 A Rose by Any Other Name: Ketoacidosis Due to SGLT2 Inhibitors Reveals Latent Autoimmune Diabetes

Thomas Nodzynski and Todd C. Lee

e5 The Many Shades of Dyspnea

Ebrahim Barkoudah and Christopher L. Roy

CLINICAL RESEARCH STUDIES

100.e1 Effect of Age on the Manifestations and Outcomes of Invasive Pneumococcal Disease in Adults

Thomas J. Marrie, Gregory J. Tyrrell, Sumit R. Majumdar, and Dean T. Eurich

Understanding that the incidence of invasive pneumococcal disease is highest at the extremes of age, the authors explore the influence pneumococcal vaccines have on the prevalence of this disease in specific age groups. In adults with invasive pneumococcal disease the mortality rate increases, while symptoms decrease with increasing age. It may be necessary to change current vaccination strategies to accommodate these factors in the very elderly.

100.e9 Temporal Trends in the Clinical Acuity of Patients with ST-Segment Elevation Myocardial Infarction

Udhay Krishnan, Josef A. Brejt, Joshua Schulman-Marcus, Rajesh V. Swaminathan, Dmitriy N. Feldman, Parag Goyal, S. Chiu Wong, Robert M. Minutello, Geoffrey Bergman, Harsimran Singh, and Luke K. Kim

With the rise of well-coordinated STEMI systems of care, more extreme-risk patients with high clinical acuity are undergoing cardiac catheterization. More studies are needed to better define this high-risk cohort and identify additional characteristics that may influence mortality in this population.

101.e1 Limited Relationship of Voltage Criteria for Electrocardiogram Left Ventricular Hypertrophy to Cardiovascular Mortality

Le Dung Ha, Ayman Elbadawi, and Victor F. Froelicher

While numerous methods have been proposed for diagnosing left ventricular hypertrophy using the electrocardiogram, they have limited sensitivity for recognizing pathological hypertrophy. Only two leads with voltage criteria exhibited sufficient classification power for clinical use; these leads are not usually considered and have only a weak association with hypertrophy and cardiovascular death. Thus, these should not be added to current practice where other means are more effective.

101.e9 Observation Status, Poverty, and High Financial Liability Among Medicare Beneficiaries

Jennifer N. Goldstein, Zugui Zhang,
J. Sanford Schwartz, and LeRoi S. Hicks

Because low-income Medicare beneficiaries are often hospitalized under observation status, there is concern that these patients may be at increased risk for high out-of-pocket costs related to observation care. Current Medicare cost-sharing policies related to observation care may place a disproportionate financial burden on low-income beneficiaries.

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