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Preface: Outpatient Neurology xiii

Everton Edmondson and Doris Kung


Insomnia: Personalized Diagnosis and Treatment Options 1

Kori A. Porosnicu Rodriguez, Rachel Marie E. Salas, and Logan Schneider

Chronic insomnia is a clinical diagnosis fulfilled by criteria: (a) difficulty initiating or maintaining sleep, (b) inability to sleep despite having adequate opportunities, (c) having negative daytime effects due to lack of sleep, and (d) sleep difficulty not explained by other disorder—with symptoms at least three times per week during a period of 3 months. Cognitive behavioral therapy is considered a first-line treatment but can be supported with pharmacologic or digital therapeutics. When developing a patient’s care plan, we should consider a “personomics” approach in which we personalize care plans as a form of precision sleep medicine.

Evaluation of Cerebellar Ataxic Patients 21

Sara Radmard, Theresa A. Zesiewicz, and Sheng-Han Kuo

 Video content accompanies this article at <http://www.neurologic.theclinics.com>.

Cerebellar ataxia results from damage to the cerebellum and presents as movement incoordination and variability, gait impairment, and slurred speech. Patients with cerebellar ataxia can also have cognitive and mood changes. Although the identification of causes for cerebellar ataxia can be complex, age of presentation, chronicity, family history, and associated movement disorders may provide diagnostic clues. There are many genetic causes for cerebellar ataxia, and the common autosomal dominant and recessive ataxia are due to genetic repeat expansions. Step-by-step approach will lead to the identification of the causes. Symptomatic and potential disease-modifying therapies may benefit patients with cerebellar ataxia.

Electrodiagnosis: How to Read Electromyography Reports for the Nonneurophysiologist 45

Ruple S. Laughlin and Devon I. Rubin

An electrodiagnostic evaluation is a neurodiagnostic test commonly used to evaluate neuromuscular conditions. A typical electromyography (EMG) report consists of tabular data summarizing findings from nerve conduction studies (NCS) as well as needle EMG (nEMG). A text summary of these findings is also included, followed by a clinical interpretation that evaluates the obtained NCS and nEMG in the context of the clinical presentation. For electrophysiologists and nonelectrophysiologists alike, understanding the elements of EMG report, patterns of findings in common neuromuscular conditions, and potential technical errors that can erroneously influence the clinical interpretation is vital.

Back Pain: Differential Diagnosis and Management

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David Gibbs, Ben G. McGahan, Alexander E. Ropper, and David S. Xu

Back pain is a common condition affecting millions of individuals each year. A biopsychosocial approach to back pain provides the best clinical framework. A detailed history and physical examination with a thorough workup are required to exclude emergent or nonoperative etiologies of back pain. The treatment of back pain first uses conventional therapies including lifestyle modifications, nonsteroidal anti-inflammatory drugs, physical therapy, and cognitive behavioral therapy. If these options have been exhausted and pain persists for greater than 6 weeks, imaging and a specialist referral may be indicated.

Neck Pain: Differential Diagnosis and Management

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Marc Prablek, Ron Gadot, David S. Xu, and Alexander E. Ropper

Axial neck pain is a common and important problem in the outpatient setting. In isolation, neck pain tends to have a musculoskeletal etiology and responds best to medication and targeted physical therapy. Careful history and physical examination are required to ascertain if there is a neurologic component in addition to the patient's neck pain. For patients needing surgical intervention, there are a variety of approaches and operations that can decompress the appropriate nerve root or the spinal cord itself. These operations are generally well-tolerated and provide significant benefit for appropriately selected patients.

Immunopathogenesis, Diagnosis, and Treatment of Multiple Sclerosis: A Clinical Update

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Carlos A. Pérez, Fernando X. Cuascut, and George J. Hutton

Multiple sclerosis (MS) is the most prevalent nontraumatic disabling neurologic condition among young adults worldwide. The diagnosis and management of MS is complex. The goal of this review is to provide an updated and practical approach to the diagnosis and treatment approaches in MS, emphasizing current understanding of immunopathogenesis, recent advances, and future directions, for both MS and non-MS clinicians.

Trigeminal Neuralgia: Diagnosis and Treatment

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Anthony K. Allam, Himanshu Sharma, M. Benjamin Larkin, and Ashwin Viswanathan

Trigeminal neuralgia is characterized classically by recurrent, evocable, unilateral brief, electric, shocklike pains with an abrupt onset and cessation that affects one or more divisions of the trigeminal nerve. In recent years, the classification of trigeminal neuralgia has been updated based on further understanding. In this manuscript, the authors aim to explain the current understanding of the pathophysiology of trigeminal neuralgia, current diagnosis criteria, and the pharmacologic management and surgical treatments of options currently available.

Management of Psychiatric Symptoms in Dementia 123

Yavuz Ayhan, Selam A. Yoseph, and Bruce L. Miller

Behavioral and Psychological Symptoms of Dementia (BPSD) are frequent, may start early in the disease and increase in frequency and severity over time. BPSD may be associated with medical, social, emotional, and environmental factors and potential triggers should be eliminated. Each BPSD has a unique anatomic and neurochemical profile that may help in making a diagnosis and choosing a therapy. Structured management plans help create an effective framework. Treatment options are understudied and the evidence is inconclusive for many of the pharmacological interventions. Effective nonpharmacological options should be utilized where available. Treatments should be monitored for their efficacy and safety.

Chronic Migraine: Diagnosis and Management 141

Doris Kung, Gage Rodriguez, and Randolph Evans

Migraine is the second leading cause of years lived with disability. Patients with chronic migraine (CM) face enormous barriers in accessing care and in receiving an accurate diagnosis and appropriate treatment. This article reviews the following: epidemiology, definition, pathophysiology, medication overuse, and acute and preventive treatment.

Postconcussional Syndrome: Clinical Diagnosis and Treatment 161

Ashley A. Taylor, Stephen R. McCauley, and Adriana M. Strutt

Diagnosis and treatment of postconcussional syndrome (PCS) is challenging because symptoms are vague, difficult to confirm, and attributable to other conditions. There are no uniformly accepted diagnostic PCS criteria. Clinical care largely focuses on symptom reduction and management. Moreover, the coronavirus disease 2019 (COVID-19) pandemic has increased the challenge because post-acute COVID-19 syndrome symptoms overlap with PCS. Future research should center on base rates of PCS-type symptoms in nonneurological samples and the identification and improved understanding of moderating variables contributing to the frequency, intensity, and duration of PCS symptoms.

Headache in Adolescents 177

Irene Patniyot and William Qubty

The most common headache disorders in adolescents are tension-type headache, migraine, and posttraumatic headache. These disorders in adolescents may have different characteristics than in adults but can be similarly disabling. This review highlights the emerging abortive and preventive treatment options for the adolescent population. Although future high-quality headache studies in this age group are still needed, current evidence for the safety and efficacy of various treatment modalities is also discussed.

Dysautonomia: Diagnosis and Management

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Alexandra Hovaguimian

Dysautonomias are a heterogeneous group of disorders that can cause variable symptoms ranging from isolated impairment of one autonomic function to multisystem failure. The causes are also diverse and can be central or peripheral and primary (owing to an intrinsic neurologic cause) or secondary (owing to a disorder that secondarily causes damage to the autonomic nervous system). This review covers common phenotypes of dysautonomias, primary and secondary causes, initial clinical workups, interpretation of common autonomic tests, and first-line treatments. A brief review of autonomic impairment associated with acute and long-COVID is also presented.

Educating Residents and Students in the Clinic

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Erin Furr Stimming and Madhu Soni

Training of students and residents in outpatient settings requires adequate exposure to a broad range of neurologic diseases. A competency-based method has been frequently used to provide a framework for the design and assessment of medical curriculums. However, it is the responsibility of the faculty within a medical school to design the curriculum and ensure its quality. In this article, we review learning objectives, assessment of core competencies, the current status of outpatient neurology education, and the flaws that may affect its quality. We also discuss potential strategies and approaches for the improvement of education and learning process in the outpatient setting, including early clinical exposure of students, cross-disciplinary courses, balancing case mix, near-peer teaching, active learning, electronic and online education, and virtual modules.