

Neurotherapeutics: Recent Developments

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Diseases of the nervous system often have devastating outcomes. Unfortunately, treatments for neurological disorders, which primarily tend to be progressive, are very limited. The last two decades have seen game-changing clinical developments in neuroimmunology and neuro-intervention. In this section, we will review some recent progress in four different subspecialties of neurology.

Multiple Sclerosis (MS)

Treatment of MS, that is, slowing of disease progression, has evolved from no evidence-based treatments prior to 1994 to 14 different FDA-approved disease-modifying agents in 2017. As the treatments become more effective, the threshold for tolerating disease activity has decreased. Most MS specialists now aim for NEDA (No evidence of disease activity based on MRI, relapse and disability progression). The treatment choices have expanded and offer a more aggressive approach but with increasing risk of serious adverse events. Progressive Multifocal Leukoencephalopathy (PML) has now been associated with several of the disease-modifying agents. Wong et al. review the current options in the treatment of MS.

Stroke

The acute management of cerebrovascular disease has undergone a dramatic change in the last few years. Several studies have validated the use of aggressive and early intra-arterial intervention and in selected cases expanded the window of intervention for up to 24 hours. There is also increasing evidence supporting a more aggressive approach towards detecting atrial fibrillation and secondary prevention. Mac Grory et al. review the latest advances in stroke management

Parkinson's Disease (PD)

PD continues to be a frustrating and difficult to manage neuro-degenerative disorder. Several new agents including different formulations of Levodopa and dopamine now offer additional options for optimizing care in these patients. Device-based treatments including Deep Brain Stimulation (DBS) and Levodopa Carbidopa Intestinal Gel (LGIC) are increasingly used in a select group of patients. D'Abreu reviews the latest in the management of PD. Unfortunately, no intervention has been shown to slow progression.

Epilepsy

Uncontrolled epilepsy carries significant risk of morbidity and mortality. Up to 30% of patients continue to have seizures despite appropriate treatment with multiple agents. These patients benefit from a comprehensive evaluation at an epilepsy center with experience in epilepsy surgery. Bayer et al. review the surgical options for management of intractable epilepsy.

Guest Editor

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