Parkinson Disease and Hepatitis C Virus Infection

Although an estimated 7.5 million people worldwide are living with Parkinson disease (PD), the risks of developing PD are largely unknown. In a cohort study using claims from the Taiwan National Health Insurance Research Database covering approximately 23.5 million people from 2003 to 2013, Lin and coauthors found a reduced incidence of PD at 5-year follow-up in those with chronic hepatitis C virus (HCV) infection who received interferon-based antiviral therapy. The results support existing epidemiologic evidence of an association of HCV infection with PD and suggest that HCV infection is a risk of PD development and that early antiviral therapy may lower the risk of developing PD. Editorial perspective is provided by Ramirez-Zamora et al.

Pediatric-Onset vs Adult-Onset Multiple Sclerosis

Pediatric-onset multiple sclerosis (PoMS) is a rare but devastating form of MS, with little known about the long-term consequences. Using the Swedish MS Registry with data from 64 neurology clinics in Sweden, McKay and coauthors measured the cognitive trajectories of PoMS relative to adult-onset MS in a cohort of 5704 persons with MS (300 of whom had PoMS) and 46 429 cognitive test scores. Patients with PoMS exhibited greater reduced information processing efficiency relative to patients with adult-onset MS, independent of age or disease duration. Patients with PoMS should be monitored closely for cognitive changes and helped to manage the potential challenges that early MS poses on cognitive abilities later in life. Editorial perspective is provided by Krupp and Charvet.

Cerebrospinal Fluid Neurofilament Light as a Biomarker

Studies have shown that neurofilament light protein (NfL) is a promising biomarker for neuroaxonal damage, but the potential value of NfL for diagnostic purposes is unclear. In a systematic review and meta-analysis, Bridel and coauthors used data from 10 012 individuals with neurological and psychiatric diagnoses and healthy controls (HCs) to compare cerebrospinal fluid NfL (cNfL) levels across conditions and assess the effects of age and sex. They found that cNfL levels are elevated compared with HC with most neurological conditions and that cNfL levels can be used to distinguish frontotemporal dementia from Alzheimer disease and Parkinson disease from atypical parkinsonian syndromes. Cerebrospinal fluid NfL levels increase with age in HCs and in individuals with several neurological conditions, and cNfL levels are slightly higher in male HCs compared with female HCs.

Mild Traumatic Brain Injury Recovery at 12 Months

It is unclear whether mild traumatic brain injury (mTBI), which comprises more than 80% of TBIs, is associated with long-term deficits. Using data from the Transforming Research and Clinical Knowledge in Traumatic Brain Injury (TRACK-TBI) study, Nelson and coauthors characterized the clinical recovery of 1154 patients with mTBI and 299 control patients with orthopedic trauma treated in 11 level I trauma centers and followed up for 12 months. Many patients with mTBI and control patients reported injury-related functional limitations at the 12-month postinjury end point, with limitations more common in the mTBI group (53%) than the control group (38%). These findings indicate that mTBI is not always a benign injury and that better follow-up and treatment appear to be needed.