Special Issue on Pediatric Acute-Onset Neuropsychiatric Syndrome

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WE ARE THRILLED TO INTRODUCE this special issue of *JCAP* on pediatric acute-onset neuropsychiatric syndrome (PANS) in youth. This is the first time a collection of articles concerning PANS and pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS) has been published, and hopefully represents the first group of many more data-driven studies to come regarding youth with these conditions. PANDAS was first described by Dr. Susan Swedo's group at the National Institutes of Health in the late 1990s (Swedo et al., 1999). Since initial controversy regarding the appropriateness of this diagnosis versus "regular" obsessive compulsive disorder (OCD) or tic disorders, the field has undergone much change. Biological, phenomenological, and treatment studies in youth with PANDAS have provided evidence of biological models and unique medical treatments for these patients.

However, it became clear to PANDAS researchers that children without documented streptococcal infection were still subject to an array of acute-onset neuropsychiatric symptoms, including OCD, eating restriction, tics, depression, mania, cognitive impairment, urinary urgency, sleep disturbance, and hallucinations. Thus, the term PANS was coined in 2012 to address the wider group of children who may have underlying etiologies separate from documented streptococcal infection (Swedo et al., 2012). As this is a more recent expansion of the concept of PANDAS, there are few studies yet conducted in these youth. This special issue represents a major movement forward in this field, collecting reports detailing clinical presentations of youth with PANS, open and controlled treatment data, and the first consensus conference recommendations regarding clinical evaluation of these affected youth.

The clinical presentation of PANS has vexed clinicians, as it overlaps with many other disorders. There are several articles here that discuss this issue, including a case series highlighting various etiologies and rheumatologic symptoms (Frankovich et al. 2015b), detailed descriptions of findings from clinic patients (Frankovich et al. 2015a; Murphy et al. 2015b), presentations of food restriction (Toufexis et al. 2015), and presentations in the community (Swedo et al. 2015). These reports should aid the clinician in recognizing the various presentations of youth with PANS. A detailed consensus statement is provided from experts who actively treat PANS patients and conduct research, in order to aid clinicians in evaluating these youth and/or knowing when to refer to specialists. Biological findings regarding antineuronal antibodies and cytokine levels in these children are delineated in Cox et al. (2015) and Parker-Athill et al. (2015). Finally, as treatment trials in this population are few, included here are chart reviews of response to IVIG

(Kovacevic, grant, and Swedo, 2015) and plasmapheresis (Latimer et al. 2015), and a placebo controlled study of cefdinir in a related population (Murphy et al. 2015a).

Together, these articles represent the initial push in a coordinated effort to systematically study PANS and disseminate findings regarding recognition, evaluation, etiology, and treatment. When "new" disorders are recognized in the population, afflicted families often look to resources on the web or in the lay press, or word of mouth for assistance, as there is usually little established evidence-based guidance. It is hoped that these articles will help provide additional empirical data to what is already known about PANS to allay confusion in the community and spur larger, well-controlled—and thus well-funded—studies in youth with the syndrome.

The link between inflammation and psychiatric disorders is slowly becoming stronger, and understanding PANS may help us understand not just how to better diagnose and treat youth with this syndrome, but other youth with developmental neuropsychiatric syndromes and potentially the pathogenesis of psychiatric disorders as a whole.

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