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Guest Editorial

Neurobiology of Pediatric Mood Disorders: Are We There Yet?

Jair C. Soares, M.D. and Jean A. Frazier, M.D.

THIS ISSUE OF *Journal of Child and Adolescent Psychopharmacology* contains Part I of a two-part special issue on "Neurobiology of Pediatric Mood Disorders." Some of the pioneers and leading clinical scientists working in this field have contributed their work to this project. We are delighted to have their outstanding contributions to this important series.

Contrary to past beliefs, we now know that mood disorders are prevalent in childhood and adolescence. In these age groups, unfortunately, both bipolar and unipolar mood disorders often go undiagnosed for years. We have come a long way as a field as far as being able to recognize these disorders early. Over the past few years, our field has increasingly been able to take advantage of new knowledge and developments from clinical neurosciences to begin to probe specific mechanisms and think about etiology and pathophysiology of these severe mental illnesses throughout childhood and adolescence.

Are these conditions originating from faulty neurodevelopment, or do they relate primarily to how our brains and bodies react to various stressors? Are they to some extent neurodegenerative? While no final answers are available, there is a growing consensus that the etiology may lie in the complex interface between a genetic vulnerability, likely conferred by several genes, and environmental stressors—perhaps with more impact during key periods of brain development.

The present issue provides a nice illustration of some of the emerging work. Three of the papers (Chen et al., Jarvis et al., and Patel et al.) focus on neuroanatomical and neurochemical abnormalities in unipolar and bipolar disorder children, including the role of specific substance abuse comorbidities (Jarvis et al.). Other papers presented here focus on

the phenomenology, including comorbid conditions that may be related neurobiologically, like attention-deficit/hyperactivity disorder (ADHD), as they occur so frequently in mood disorders in this age range (Daviss), as well as specific temperaments that may predispose individuals to developing a mood condition, another important and timely area of emerging research (Singh et al.). The neurocognitive impairment that is present in youth with bipolar disorder has been addressed in a comprehensive meta-analysis (Joseph et al.). There is also important research that attempts to characterize the neuroendocrine abnormalities related to depression and remission and relationships with sleep abnormalities (Rao et al.). Finally, two new studies investigate whether early intervention for children at risk for bipolar disorder may be called for (Findling et al.) or test possible new treatments for youth with ADHD and severe mood dysregulation (Waxmonsky et al.).

Part II will follow in the next issue. Some of the best minds working in the field partnered on this effort, and we are hopeful that this will signal the start of a new time where the specific mechanisms involved in etiology and pathophysiology of pediatric mood disorders will increasingly be unraveled. We strongly believe that the best window for intervention for these serious mental illnesses will be at the first few signs of difficulty, or perhaps even before the signs of the illness are present. We are living to see the time when mechanisms will be known and specific interventions will be tested, hopefully leading to a pronounced impact on the course of these diseases, and resulting in improved outcomes.

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