Introduction

This month’s Focus on Childhood and Adolescent Mental Health section includes a wide array of topics of interest to clinicians.

The association of group A streptococcal (GAS) infections with increased risk of pediatric neuropsychiatric disorders was examined by Wang and colleagues. Using Taiwan’s National Health Insurance Research Database, a follow-up cohort study was conducted in 2014 of patients younger than 18 years who were diagnosed with GAS infections from 2001 to 2010. The analyses included 2,596 patients and 25,960 controls. The primary outcome measure was occurrence of a neuropsychiatric disorder including obsessive-compulsive disorder (OCD), compulsive personality disorder, tics, and attention-deficit/hyperactivity disorder (ADHD). Severity and frequency of GAS infection were also obtained. The mean age of the GAS infection and comparison cohorts was 9 years. The GAS infection cohort had a significantly higher incidence of neuropsychiatric disorders compared to the comparison cohort (60.42 vs 49.32 per 10,000 person-years), with a hazard ratio of 1.22. On average, the neuropsychiatric disorders developed 3.6 years after the first GAS infection episode. The risk of tic disorder (HR = 1.63) was significantly increased after GAS infection and was significantly higher than for ADHD (HR = 1.16) and OCD (HR = 1.08). Greater severity and more frequent occurrence of GAS infections were associated with higher risk of developing neuropsychiatric disorders.

There is increased interest in the role of brain-derived neurotrophic factor (BDNF) in the development of OCD and in cortisol and adrenocorticotropic hormone (ACTH) levels in individuals with OCD. Şimşek and colleagues examined whether BDNF, cortisol, and ACTH levels differ between children and adolescents with OCD and healthy controls. They also investigated whether there was a relationship between BDNF, ACTH, and cortisol levels and the severity of OCD in youth. Twenty-nine children ages 7 to 17 years with OCD participated in this study prior to receiving treatment for OCD. The control group consisted of age- and gender-matched children with no history of medical problems. Blood samples of BDNF, ACTH, and cortisol were obtained. The mean duration of OCD symptoms was 17.9 months. There were no differences in depression scores between the youth with OCD and the control group. Levels of BDNF, cortisol, and ACTH were significantly higher in the patients with OCD compared to the control group. Neither duration nor severity of the OCD symptoms was significantly associated with BDNF, ACTH, and cortisol levels. The authors suggest that increased levels of BDNF may be an adaptive response to hypothalamic-pituitary-adrenal axis hyperactivity on brain tissue in the early stages of OCD.

Gracious et al examined whether antidepressant use is associated with a risk of fracture in depressed youth taking antidepressants. A retrospective longitudinal cohort study was conducted using state Medicaid claims data from 2001–2009. The sample included 50,673 youth ages 6–17 years with a new episode of depression and no antidepressant use 6 months prior to the diagnosis of depression. The primary outcome measure was time to first fracture, which included fractures of the upper and lower limb, spine and trunk, and skull. The median follow-up for participants was 1.7 years. Of the 50,673 depressed youth, 17,691 (34.9%) were prescribed antidepressants. Of the total sample, 5,872 (11.6%) experienced a fracture. Of those youth who had a fracture, 2,228 (37.9%) were exposed to antidepressants. The fracture group had higher use for all antidepressant classes. The hazard ratio (HR) was 3% higher for youth currently prescribed antidepressants compared to those who were never prescribed antidepressants (HR = 1.03). Fracture risk was greater during the first 30 days after starting antidepressants compared to the other time periods. The authors conclude that current antidepressant treatment for depressed children and adolescents is associated with a small but significant increase in fracture risk during the first 30 days of treatment. The authors recommend assessment for fracture risk prior to initiation of antidepressant treatment and monitoring for baseline conditions that can affect fall risk.
Itani and colleagues report that the prevalence of violent behavior in junior and senior high school students in Japan has been increasing over the past decade. These investigators conducted a nationwide survey to determine the prevalence of anger and impulsivity in a population of 94,777 Japanese adolescents. Self-administered questionnaires were completed by these junior and senior high school students. Personal data and lifestyle information (eg, extracurricular activities, alcohol, smoking, sleep, mobile phone use) were obtained. Mental health status was evaluated using items from the General Health Questionnaire. To assess feelings of anger, the respondents were asked, “Have only you felt angry, or have you felt angry more strongly than others during the previous month, even though you may have seen, heard, or experienced the same things as others?” To assess impulsivity, the respondents answered the question “Have you behaved impulsively (for example, behaved violently, used abusive language, made an impulsive purchase despite having no money, ate or drank too much, etc) during the previous month?” Response options included never, sometimes, often, and always. Experiencing intense anger was reported by 8.7% of the adolescents. The prevalence was 7.8% for male students and 9.6% for female students. Experiencing intense impulsivity was reported by 7.5% of the participants. Prevalence rates were 7.0% for male students and 8.1% for female students. Smoking, consuming alcohol, short sleep duration, decreased positive feelings, increased depressive feelings, and mobile phone use for longer hours were associated with intense feelings of anger and intense feelings of impulsivity. The investigators suggest that healthy lifestyle habits, good sleep habits, and improved mental health may be important factors to prevent the occurrence of intense feelings of anger and impulsivity among Japanese adolescents.

There is little information about sexual functioning in adolescents with major depressive disorder. Deumic et al examined sexual functioning in 15- to 20-year-olds enrolled in a prospective observational study. The sample included 235 unmedicated participants enrolled within a month of beginning treatment with a selective serotonin reuptake inhibitor (SSRI). The assessment battery included psychiatric diagnostic assessments, depression and anxiety self-report measures, and measures of cigarette and alcohol use. Sexual functioning was assessed using the 14-item Changes in Sexual Functioning Questionnaire. Of the 235 participants, 60% were female. The mean age of the sample was 19 years. Fifty-three percent were taking an SSRI. The presence of major depressive disorder was associated with poor sexual functioning, regardless of gender. Antidepressant use was not associated with sexual functioning in the overall sample or in those individuals with major depressive disorder. There was no significant association between anxiety and sexual functioning. Interestingly, affective depressive symptoms, rather than neurovegetative or cognitive depressive symptoms, most accounted for the association between depression and lower sexual functioning.