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Improvement of psychiatric symptoms in youth following resolution of sinusitis



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ABSTRACT

Introduction: Accumulating evidence supports a role for inflammation in psychiatric illness, and the onset or exacerbation of psychiatric symptoms may follow non-CNS infections. Here, we provide the first detailed description of obsessive-compulsive and related psychiatric symptoms arising concurrently with sinusitis.

Methods: We reviewed the charts of 150 consecutive patients evaluated in our Pediatric Acute-onset Neuropsychiatric Syndromes clinic for documented sinusitis as defined by the American Academy of Pediatrics guidelines. Sinusitis treatments, sinonasal imaging, and neuropsychiatric symptoms before, during, and after sinusitis onset were noted. Patients were included in the final review if they had a clear diagnosis of isolated sinusitis (without concurrent illness and/or immunodeficiency), and were evaluated during an episode of sinusitis.

Results: 10/150 (6.6%) patients had isolated sinusitis at the time of their neuropsychiatric deterioration. Eight patients received antibiotics to treat sinusitis, three of whom also received sinus surgery. Neuropsychiatric symptoms improved in all eight patients concurrent with resolution of sinusitis per parent report and clinician assessment. One patient did not follow through with recommended sinus surgery or antibiotics and her psychiatric symptoms persisted. One patient was lost to follow-up.

Conclusions: Improvement of psychiatric symptoms correlated with resolution of sinus disease in this retrospective study. Identification, treatment, and resolution of underlying infections, including sinusitis, may have the potential to change the trajectory of some neuropsychiatric illnesses. Randomized clinical trials are needed.

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1. Introduction

A growing body of literature supports a link between inflammation and psychiatric symptoms [1–5]. Concurrent inflammatory disease and psychiatric symptoms have been described in conditions including neuropsychiatric systemic lupus erythematosus [6], schizophrenia [7], acute disseminated encephalomyelitis (ADEM)

[8], Behcet's [9], anti-NMDA-receptor encephalitis [10], pediatric autoimmune neuropsychiatric disorder associated with group A streptococcus (GAS) [11,12], and toxoplasmosis [13]. To our knowledge, no one has yet reported neuropsychiatric changes with isolated sinusitis.

Research criteria for a condition labeled “Pediatric Acute-onset Neuropsychiatric Syndrome (PANS)” were created to study a group of children who have an abrupt, dramatic onset of obsessive compulsive (OC) symptoms and/or eating restriction accompanied by an equally abrupt onset of at least two co-morbid neuropsychiatric symptoms, which may include anxiety, emotional lability, depression, irritability, aggression, oppositionality, deterioration in school performance, behavioral (developmental) regression, sensory amplification, movement abnormalities, sleep disturbance,

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