

A stylized, colorful illustration of a landscape. The foreground features rolling green hills with a dark brown path. On the left, there is a green tree, a purple flower, and an orange flower. A small red bird is flying in the sky. The background consists of layered, wavy bands of blue and white, suggesting a sky or water. The overall style is simple and artistic.

PANS Cases: Through the Eyes of a Pediatrician

Cheryl Standing, MD, FAAP

May 21, 2022

A stylized, colorful landscape illustration. In the foreground, a green hill with rounded, layered shapes is topped by a flower with a dark brown stem and two large, overlapping petals, one purple and one pink. Below the flower are several orange and brown rounded shapes. The background features rolling hills in shades of light blue and white, with a clear blue sky at the top.

Case #1

Presented July 20, 2021 to our clinic

6 year old male

Onset Super Bowl Sunday, 2019

Acute onset tics, OCD, separation anxiety,
and nightmares

PMH

- Term vaginal delivery with BW 8# 14 oz
- Breast fed 16 months
- Cradle cap
- At least 2 episodes of perianal strep
- Many episodes of OM
- Constipation
- Speech therapy
- No hospitalizations or surgeries

Family History

- Mom has anxiety and OCD
- MGF had anxiety, OCD and tics

Social History

- Mom dental hygienist
- Dad supply operations for 3M
- 9 year old brother
- Expecting a new baby

Diet

- Chicken nuggets, pizza, cereal, toast, eggs, bananas, strawberries, chips, animal crackers, milk, water, cheeseburgers
- Avoid red dyes

Course of illness

- October 2020 Psychiatric evaluation – not autism
- Clonidine improved sleep
- November 2020, elevated strep and mycoplasma titers
- Seen by PANS provider in Bloomingdale (30 day rotation each: Keflex, augmentin, cefdinir, Zithromax, amoxicillin). LDN 1.5 mg, brain MRI negative.
- No improvement

Laboratory

- ASO 56 (0-240)
- AntiDNase B 186 (0-375)
- Mycoplasma IgG and IgM positive
- SARS 2 Ab negative
- ANA+
- TSH normal
- Tissue transglutaminase IgA negative
- Immune globulin levels normal
- Ferritin 14
- Vitamin D 70
- CBC, Cu, Zn normal

Initial Management

- Rifampin 300 mg twice a day for 21 days
- Clonidine 0.1 mg QHS
- LDN 1.0 mg QHS
- Aleve 220 mg BID
- Child Psychiatry referral
- Dietary recommendations

Course

- Zithromax 250 mg daily
- Lexapro 5 mg daily
- LDN 1.5 mg daily
- Sulindac 75 mg BID
- Whole foods diet, GF, DF, dye free
- Tics, OCD, aggression have resolved. Very loving with new sister
- Tonsillectomy



Case #2

Presented April 1, 2021

12 year old male

Onset June 2020 while playing a video
game

Abrupt onset tics, OCD, anxiety, emotional volatility

History

- June 2020 head nodding tic while playing video games
- November 2020 head nodding tic, very sad, emotional volatility, intense worry about whether people noticed tics. EEG, head CT negative.
- 'the curse', counting OCD, balancing eye movements
- Psychological evaluation: Anxiety, not ADHD
- Sertraline 25 mg

PMH:

- Born by NSVD at term with BW 6#4oz
- Initially breast fed but switched to Alimentum because of reflux
- Reflux medications for 3 months
- Developmental milestones precocious
- Many episodes of OM, strep, perianal strep
- Parents learned to recognize strep infections in all 3 children because they had behavioral changes that resolved with ATB
- Tonsillectomy

Family History

- Anxiety and depression
- No autoimmune diseases
- Siblings have behavior changes ('get mean and overly emotional') with strep infections that resolve with ATB

Social History

- Lives with parents and two siblings
- 6th grader with good academic record
- Loves to play with friends. Loves sports (baseball, basketball, football and track).
Also likes video games
- Pandemic isolation particularly hard on him and contributed to his anxiety
- Family eats a health diverse diet

Labs

- Strep and lyme titers negative
- Mycoplasma IgG positive
- ANA+
- Tissue transglutaminase <0.5
- Immune globulin levels normal
- Ferritin 13
- Vitamin D 60

Initial management

- Augmentin 30 days, then switched to Zithromax
- Aleve 220 mg BID
- Low dose naltrexone 2.0 mg QHS
- Recommended CBT
- Child Psychiatry referral
- Pediatric Neurology referral
- Discussed GF,DF whole foods diet trial

Course

- Added iron supplementation
- Psych switched sertraline to Luvox 12.5 mg, then 25 mg daily
- OCD and emotional volatility resolved quickly
- Tics and anxiety decreased, but not resolved
- By July, only a minor tic remained
- Hard to find a CBT therapist
- Wanted to eat gluten again....within 24 H mood much worse ('morose'), struggled to make decisions, so eliminated it again and symptoms reversed
- SARS 2 vaccines with no flaring
- Tried QOD Zithromax dosing and tics / OCD returned; resolved again with QD dosing



Case #3

Encounter date February 15, 2022

9 year old male

SARS COV2 infection November 2021

Thanksgiving break became abruptly agitated, argumentative and aggressive.

Cough tic

Insomnia

OCD questioning

PMH:

- Born at term by NSVD with BW 6# 13oz
- Pregnancy complicated by subchorionic hemorrhage/bedrest
- Breastfed x 4 months. Mom had mastoiditis requiring hospitalization
- Frequent OM with 3 sets of PE tubes
- Frequent abdominal pain associated with dairy intake
- Expressive aphasia until 3 years
- Asthma, allergies

Labs

- IgA <5, IgG, IgM normal
- Tissue transglutaminase IgA <0.5
- Vitamin C 44
- Ferritin 20
- TSH 1.63
- CBC, Cu, Zn normal

Management

- Motrin 200 mg three times a day
- Luvox 12.5 mg x 2 weeks, then 25 mg daily
- Atarax 15 mg QHS
- Melatonin 2-5 mg QHS prn
- Vitamin D 800-1000 IU daily
- Iron 30 mg daily

Course

- March 24, 2022 Follow up
- 90% back to old self
- Skateboarding, doing things with friends
- Agitation, aggressiveness, OCD, tics resolved, sleeping well
- Still has some distraction / cognition effects that teacher notices

A stylized landscape illustration. The foreground features rolling green hills with varying shades of green. A small brown path winds through the hills. On the left, there is a green tree and a purple flower. A red bird is flying in the sky. The sky is blue with white clouds. The word "Thanks!" is written in a brown, cursive font in the center of the image.

Thanks!