DIAGNOSIS AND TREATMENT: PSYCHIATRIC PERSPECTIVE

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STANFORD PANS PROGRAM
SIGNS: PANS

• Sudden onset
• Multiple symptom domains
• Severe symptoms
• Relapsing-remitting course

IT MIGHT BE PANS
Infections
- Group A Strep
- Mycoplasma
- Other

Immune Dysregulation
- Adaptive Immune System
- Immune Deficiency
- Innate Immune System
- ?Other

Disruption of Blood Brain Barrier

Antibodies +/- Cytokines +/- other immune mediators

PANS (Pediatric Acute-onset Neuropsychiatric Syndromes)

?Altered neuronal signaling

Jennifer Frankovich MD MPH
PANS TREATMENT

Infection, Inflammation, Predisposition

Safety
Case management
Psychoeducation
Support
CBT, DBT, HRT…

Antibiotics
Immune Modulation
Specialty Consultation

Psychotropics

Fall out

School accommodations
Rehab
OT
PT
THE PSYCHIATRIST’S ROLE

• FUNCTION:
  • Educate families
  • Ensure safety
  • Facilitate child receiving medical treatments
  • Inform treatment team re sx
  • Address symptoms
  • Help coordinate care
PSYCHIATRIC AND BEHAVIORAL INTERVENTIONS

- Require individualization
- Many variables change at once
- Psychotropic medication responses are atypical
- Require adjustment over illness course
- Require multidisciplinary approach
- Derive from evidence-based treatments
STANFORD PANS PROGRAM
FINDINGS AND WORKS IN PROGRESS

• Immunology
  • HLA
  • Monocytes
  • GAS toxin causing TH17 skew
  • Vasculitis markers

• Treatment Responses
  • NSAIDs
  • IVIG
  • Corticosteroids
  • Rituximab/Mycophenylate/Methotrexate
  • Immune deficiencies
  • Sinus infections

• Symptoms
  • Hallucinations
  • Pain, fatigue, exercise intolerance
  • Caregiver Burden
  • Caregiver Skills Group
  • Cognitive changes
CAREGIVER BURDEN LIKE ALZHEIMER’S FAMILIES

The graph illustrates the caregiver burden inventory (0-100) over years followed by the FANS clinic. It shows the comparison of mean CBI in Alzheimer's study 1, 2, and 3, indicating different statuses: disease remission and disease flare.
HLA-B frequencies in caucasian controls and caucasian PANS cases

Caucasian_donors (N = 776)
Caucasian_PANS (N = 74)
Effect of early and prophylactic NSAIDs on flare duration

Flare not treated with NSAIDs: 12.5 weeks
Flare while patient already on NSAIDs: 8.5 weeks
Flare treated within 30 days of flare start: 10 weeks
EFFECT OF CORTICOSTEROIDS ON WEEKS IN FLARE

**Single episode of PANS or relapsing/remitting PANS**

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<th>Weeks</th>
<th>Treated</th>
<th>Untreated</th>
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<td>10.3</td>
<td>16.5</td>
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<td>18</td>
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<tr>
<td>24</td>
<td>10.3</td>
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**Duration of the initial presentation (i.e., first PANS flare) of PANS**

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SYMPTOM PREVALENCE FINDINGS

PAIN, FATIGUE OR EXERCISE INTOLERANCE: 81%

SENSORY DISTRIBUTION/HALLUCINATIONS 37%

HALLUCINATIONS
n= 153

- None: 90
- Visual: 68
- Auditory: 45
- Other: 23

None
Visual
Auditory
Other

0
23
45
68
90