

December 10th, 2020

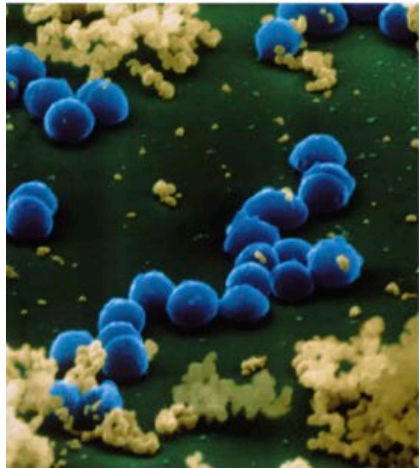
Shirley Wang, M.D., F.A.C.R, F.A.C.P.

Specialty: Rheumatology, Adult/Pediatric

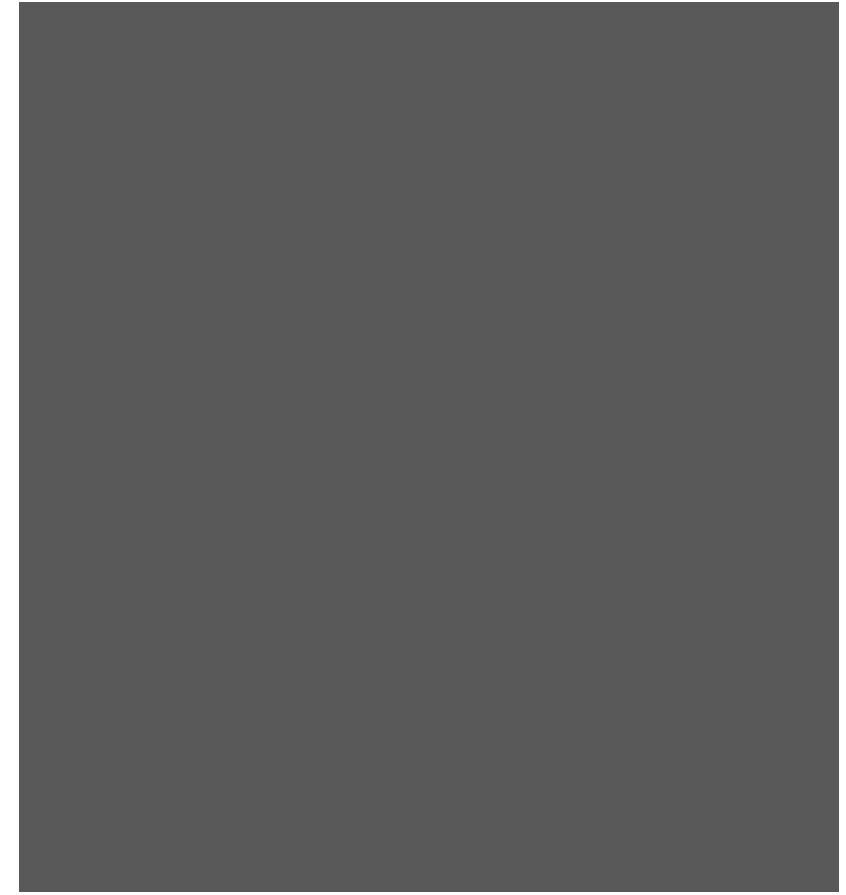
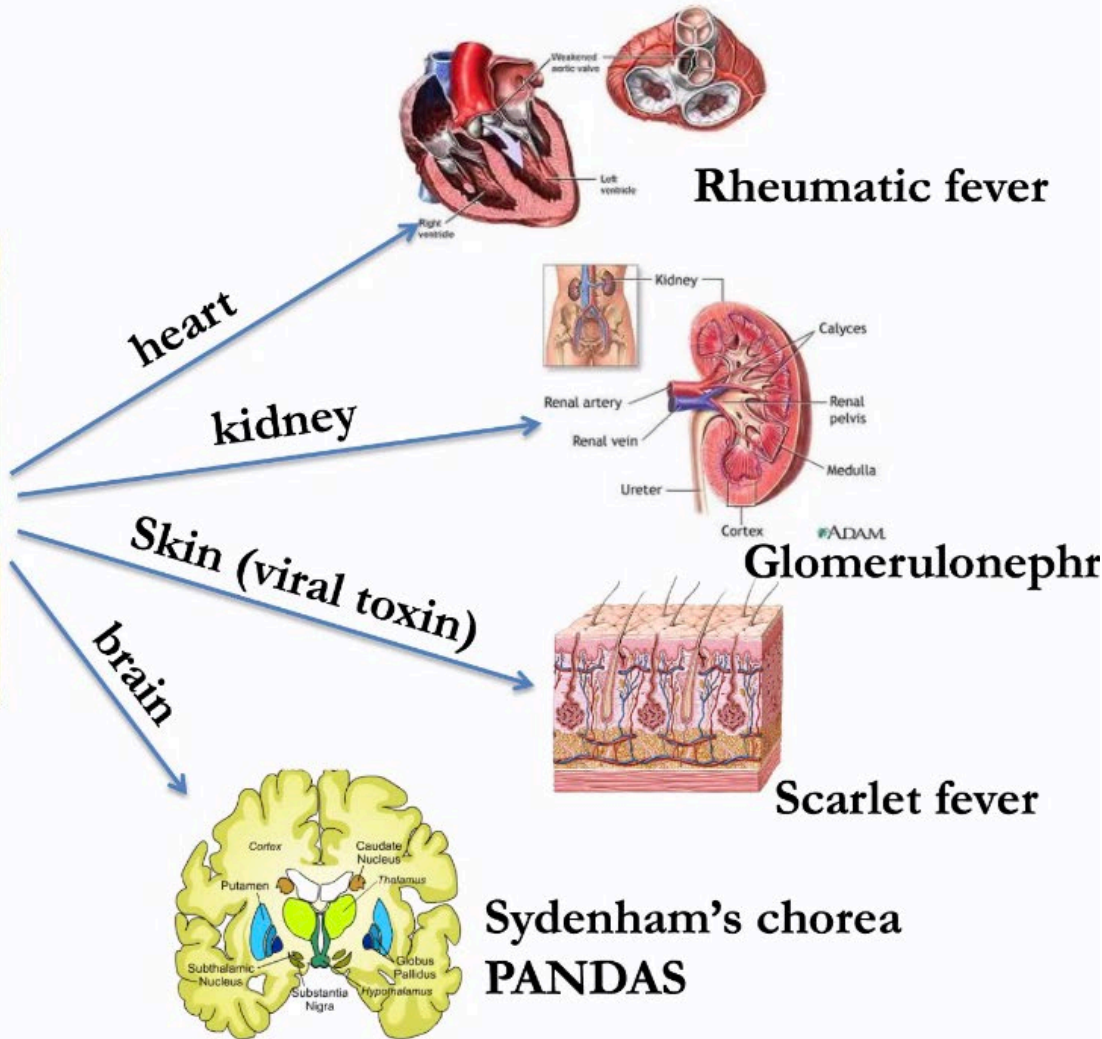
Outline on PANS/PANDAS (autoimmune basal ganglionitis) management:

- I. Identify and treat active infection and consider prophylaxis in certain cases
- II. Treat post-infectious inflammation
- III. Treat psychiatric symptoms

Group A β -hemolytic *Streptococcus pyogenes* are associated with post-infectious autoimmunity

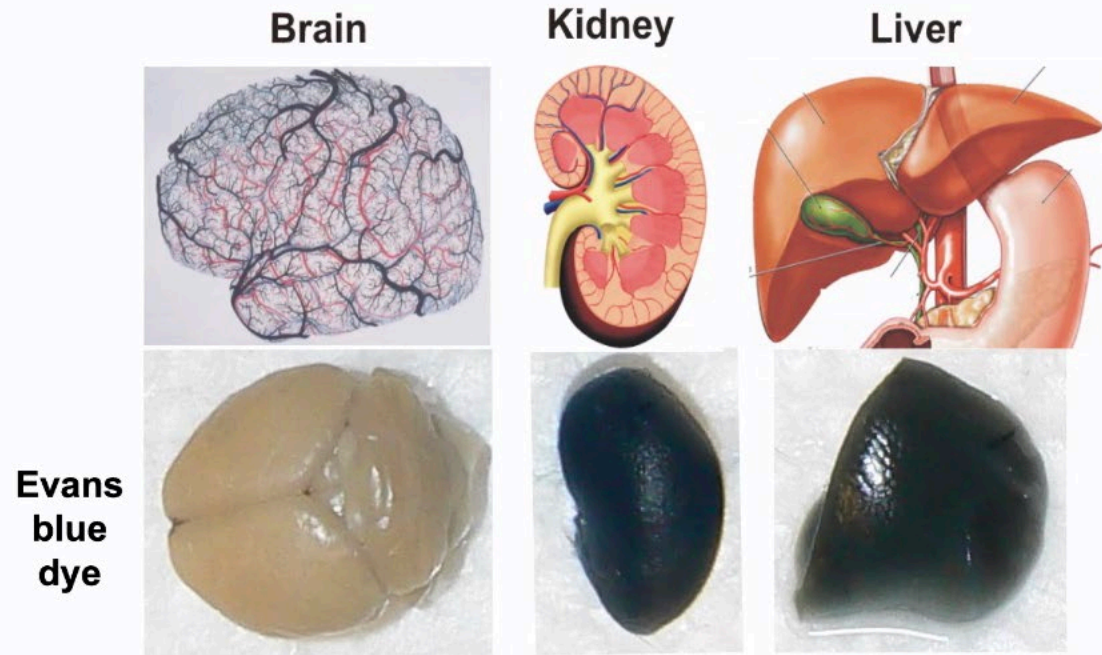


Implicated in autoimmunity



Adopted from PANS conference series 2020 sponsored by Foundation for Children with Neuroimmune Disorders

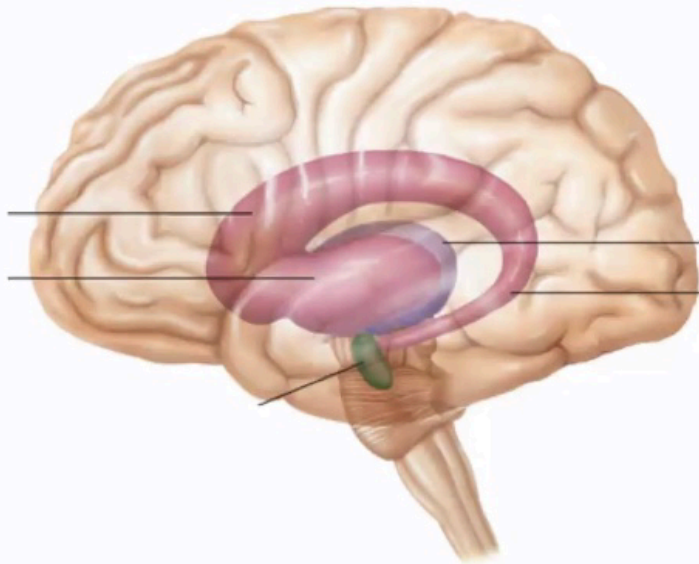
The blood-brain barrier: an important gatekeeper between the blood and central nervous system



- Maintains brain homeostasis
- Limits CNS entry of
 - pathogens
 - immune cells
 - drugs

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Basal ganglia exerts an inhibitory influence on brain functions (motor & behaviors systems)
→ **damage can result in release of inhibitory circuits**



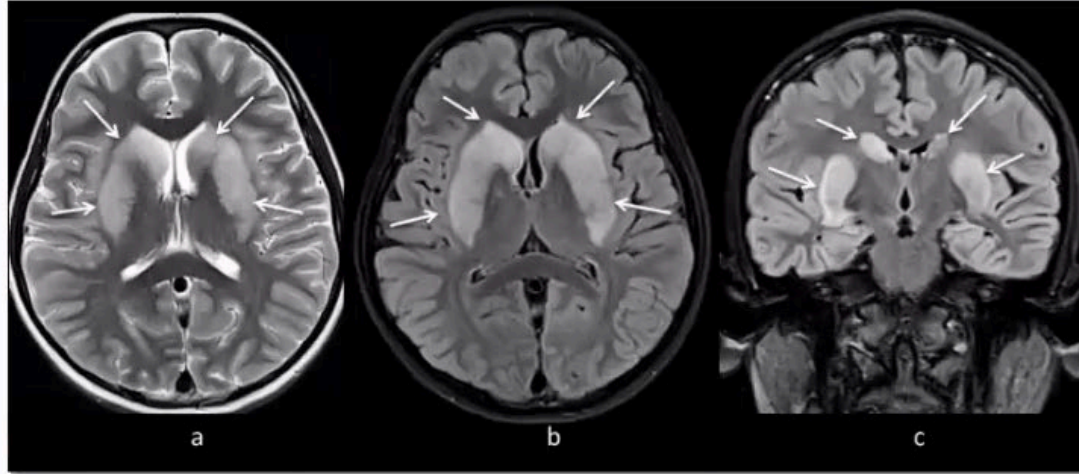
Control of :

- Movements
- Mood & emotion
- Behavior
- Procedural learning
- Cognition

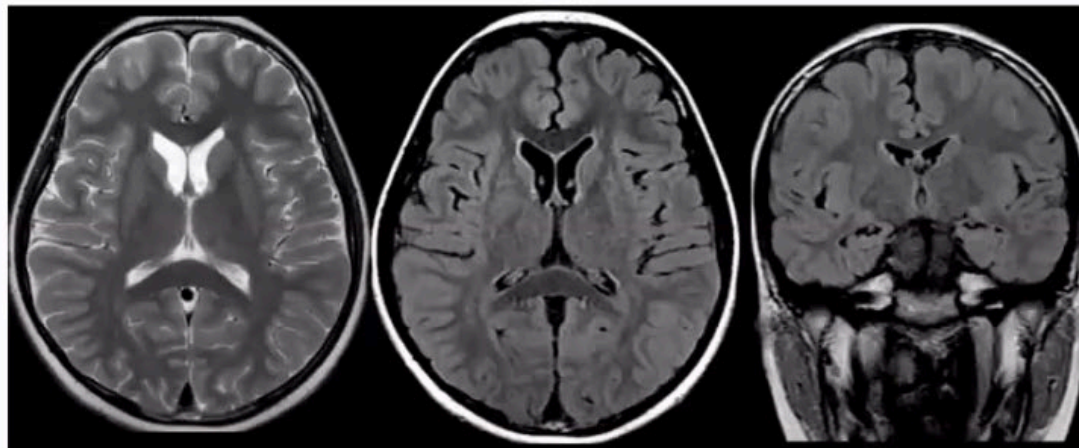
OCD
Food Restriction
Anxiety/Depression
Sensory/Motor processing
Sleep Disturbance
Frequent urination
Behavioral/developmental regression
Aggression/oppositional
Tics
Deterioration in school performance
Social (family, friends) relationship

Adopted from PANS
conference series 2020
sponsored by Foundation
for Children with
Neuroimmune Disorders

8 year old male abrupt onset personality change. MRI in first few days of illness



MRI normal 6 months later



University

Image courtesy of
Stanford
University PANS
Clinic

Clinical Management of PANS/PANDAS guideline from JCAP 2017

- Identify and treat active infections and consider prophylaxis in certain cases
- Group A Strep (throat, peri-anal, impetigo)
- Sinusitis, Abscess, Otitis media, toe infection
- Mycoplasma
- Other infections

Clinical Management of PANS/PANDAS guideline from JCAP 2017

- Treat Post-Infection Inflammation
- Disease severity evaluation, Chronicity staging
- Mild: NSAIDS (ibuprofen, naproxen)
- Moderate-Severe: Corticosteroid (oral, IV), use as acute flare/bridge therapy due to long term negative sequelae (diabetes, obesity, HTN, bone thinning, cataracts, GI ulcers)
- Importance of timely evaluation and application of IVIG and/or Plasmapheresis
- Extreme Severe cases: in addition to above, evaluation for Rituximab, Mycophenolate

Clinical Management of PANS/PANDAS guideline from JCAP 2017

- Treat psychiatric symptoms
- CBT
- SSRI
- Guanfacine, clonidine, gabapentin

Concomitant Autoimmune Inflammatory Diseases

- Nearly 40% of PANS/PANDAS patients have concurrent inflammatory arthritis
- Many subtypes with FDA approved treatment modalities and guideline on management
- Benefits for PANS/PANDAS symptoms/inflammation control?