

CNS Lupus

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CNS Lupus: General Comments

Complex Topic

Most Difficult Organ System to Understand and Diagnose

Serious Consequences

Overlaps with Stress, Anxiety and Depression

Steroids, the Two Edged Sword

Usually treat both the lupus and the neurological problem.

CNS Lupus: Diagnosis

- Labs
- Psychological Testing
- Spinal Fluid Analysis
- EEG
- Imaging
 - MRI
 - Angiogram

CNS Lupus: Lab Tests

- APL – strokes, vascular dementia, seizures, headache, transverse myelitis.
- Antiribosomal P- Psychosis, depression.
- Antineuronal antibodies, anti NMDA- neuropsych issues.
- Antiganglioside antibodies- PN, migraine
- Antibodies to microtubules-associated protein 2- NPL
- General lab evidence of lupus activity.

CNS Lupus: Psychometric Testing

- Several hour battery of tests.
- Includes IQ, various cognitive abilities assessment, depression screens.
- May be able to differentiate structural brain malfunction, depression, areas of the brain involved, and suggest treatment options.

CNS Lupus: CSF

- Spinal fluid- may help with aseptic meningitis, infection, transverse myelitis.

CNS Lupus: EEG

- Often abnormal in Lupus but may not be specific.
- Can detect seizures.
- May help locate area of brain involved.
- Video EEG may help with pseudoseizures.

CNS Lupus: Imaging

- MRI-can detect strokes, clots, vasculitis, subtle areas of brain damage.
- White Matter Lesions
 - 20% in patients less than 50
 - 90% in patients over 70
 - 43% in lupus patients/but not all had CNS lupus
- Lupus patients may have decreased cerebral and corpus collousum volume – significance unknown.

CNS Lupus: Angiogram

- Useful for vasculitis or clots.
- Dye used can be harmful to kidneys.

CNS Lupus: Pathophysiology

- Vascular Direct

- Vasculitis
- Vasculopathy
- Thrombosis

- Vascular Indirect

- Blood brain Barrier

Vascular Atherosclerotic

- Years of chronic inflammation
- Acute
- Chronic/Subacute

CNS Lupus: Pathophysiology

- Secondary Causes
 - Infections
 - Metabolic: liver, renal, diabetic.
 - Hypertension
 - Medications.
 - Steroids

CNS Lupus: Syndromes

- Seizures
- Stroke
- Headaches
- Nerve Damage/Neuropathy
- Cognitive Impairment (fatigue)
- Dementia
- Neuropsychological Lupus
- Uncommon Manifestations

CNS Lupus: Seizures

- 10-20% of CNS Lupus
- Associated with Sm, APL.
- Steroids/ prevent recurrence?
- Treat seizures.
- Rx: Rituxan, Cytoxan, pulse steroids

CNS Lupus: Stroke

- APL
- Secondary Atherosclerosis
- Vasculitis.
- Rx: ASA, AC, Steroids

CNS Lupus: Nerve Damage

- Isolated nerve damage vs Peripheral Neuropathy
- May respond to steroids.
- Consider secondary causes, esp. Diabetes.
- Rx: Rituxan, Cytoxan
- Rx also includes pain control/gabapentin, tricyclics.
- Can be an initial manifestation of Vasculitis
- Autonomic Dysfunction

CNS Lupus: Headache

- 50% of Lupus patients
- Similar to controls
- ? Related to Raynauds.
- Rx: calcium channel blockers/amlodipine.
- Migraines.

CNS Lupus: Cognitive Impairment

- VERY controversial.
- Multiple secondary causes
 - Depression
 - Medications
 - Fatigue
- Neuropsych testing
- It is what they say it is!
- Role of fatigue
- APL/ASA, AC
- Stimulants
- NOT beginning of dementia
- Worsened with stressors
- Complicated by preexistent or development of emotional dx

CNS Lupus: Dementia

Oft related to vascular, secondary issues.

Steroids: high vs lo dose.

Look for depression.

CNS Lupus: NeuroPsych

Mood Disorders: Depression, Anxiety

- Rarely psychosis.
- Labs: Ribosomal P, anti neuronal antibodies.
- 10-80%
- Incidence increasing: better tests, better awareness.
- Rx: steroids, Rituxan; Cytoxan for seriously ill.
- Rx: immunosuppressives.
- Rx: concomitant psych rx: CBT, counseling.
- Very complex, hard to manage. Sx may take months to improve.

CNS Lupus: Uncommon

- Hearing Loss
- Guillain Barre
- TTP
- Ocular Involvement.
- Transverse myelitis.
- Meningitis.

CNS Lupus: Summary

- Complex causes, primary and secondary
- Overlap of preexistent or developing emotional issues.
- Dual nature of steroids.
- Watch carefully for APL.
- Rx both the lupus and the CNS manifestations.
- Manage premature atherosclerosis aggressively.

