Uncommon Schmahmann – A Case-Based Discussion of Cerebellar Cognitive Affective Syndrome

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## BACKGROUND:

- CCAS is a cognitive and affective phenotype that presents after cerebellar damage
- 4 primary symptom domains: executive functioning, visuospatial cognition, affect, and language
- While diagnostic tools exist (CCAS-Scale), there is limited guidance for symptoms management
- Of published case reports, few successful treatment strategies have been explored

# CASE:

#### Patient

- 56 year old male with history of ADHD experienced a head trauma resulting in occipital and cerebellar intracranial hemorrhage
- 2 years following injury, he was referred by neurologist to psychiatry clinic with altered vision, postural instability, memory deficits, and significant affective instability
- At time of intake, he was taking Trileptal and Wellbutrin with no appreciable benefit

#### **Outpatient Treatment Course**

- Trileptal was initially titrated to dose of 600 mg BID, which he was tolerating well, with some improvement in his affective symptoms
- Later transitioned to Depakote due to suspected interaction between Trileptal and his antihypertensives
- Depakote ER titrated to 750 mg nightly with significant benefit in patient's affective regulation and anxiety
- Following mood stabilization, he was started on Ritalin to target his impaired attention and concentration
- Ritalin was titrated up to 20 mg twice daily resulting in improved ability to participate in therapy and rehab, and led to reduction in affective symptoms
- Concurrently, patient completed vestibular rehab and explored acupuncture to improve his balance and coordination
- Patient also engaged in individual psychotherapy to improve his coping skills and emotion regulation
- Following stabilization, patient completed CCAS Screen; results were consistent with probable diagnosis of CCAS

Cerebellar Cognitive Affective Syndrome (CCAS) is a rare clinical syndrome precipitated by cerebellar damage

Clinical guidance on management is limited; multidisciplinary, symptom-targeted treatment may lead to functional improvement



#### DISCUSSION:

- CCAS is hypothesized to be due to disruption of pathways connecting cerebellum, limbic circuity, and primary association cortices
- Symptom phenotypes are variable and can significantly impact function and quality of life
- Case report level support for use of SSRIs in CCAS

### Symptom-Focused Management:

- Affective stability achieved with Depakote ER
- Improved attention and concentration with Ritalin -> potential neuroprotective effect of stimulants following brain injury
- Patient developed insight into his limitations and stressors via individual psychotherapy
- Improved mobility and physical functioning following vestibular rehab and acupuncture
- Cumulatively, contributed to significantly improved functionality and restoration of independence

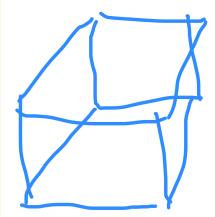


Fig 1: Cube Draw task from CCAS- Scale completed by patient

## IMPLICATIONS:

- Clinicians should be aware of CCAS-Scale for the screening
- of CCAS in patients with known cerebellar damage
- Clinicians should consider multidisciplinary, symptomfocused approach to reduce overall symptom burden

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