Sunflower Syndrome

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What is Sunflower Syndrome ?

> Sunflower syndrome (SFS) is a rare **childhood-onset generalized epilepsy** characterized by **photosensitivity, heliotropism** (tendency to move towards light) and **drug-resistant stereotyped seizures.**

> The attraction to light often precedes the onset of handwaving episodes by days to months.

> Multiple highly stereotyped hand-waving episodes characterized by hand waving in front of the patient's face while looking toward the sun along with variable **eyelid fluttering** and grossly intact awareness.

> Additionally, these handwaving episodes can occasionally evolve into other seizure types including generalized tonic-clonic seizures.

Is it a form of 'Self Induced seizure' ?

Sunflower syndrome was originally described as a self-induced photosensitive epilepsy i.e hand waving behaviour is prone to induce the seizure.

EEG studies have found that the misfiring of neurons in the brain or **epileptiform activity** start at the same time as the hand waving behavior. This suggests that the **hand waving may in fact be part of the seizure, not the cause.**

How do we diagnose ?

- There is currently no clinical or laboratory standard for diagnosing Sunflower syndrome.

- However, individuals with Sunflower syndrome have abnormal electroencephalograms (EEGs) with features consistent with generalized epilepsy.

Treatment

The only way to find an effective treatment is by investigating the Natural History of the Sunflower Syndrome.

Sunflower syndrome often requires Polytherapy (more than one medication) to help control the hand Waving Episodes.

There is no 'One Size Fits All' therapy i.e no medication has been found to be effective in all the patients.

Behavioral Interventions can help reduce the Hand Waving Episodes. It includes Hats, sunglasses, hand holding, special or tinted glasses.
Welder's goggles are reported to be the most effective.

Ongoing Research

Gene Identification- The disorder is highly stereotyped and typically begins during the first decade of life, suggesting Sunflower syndrome may have an underlying genetic etiology.

Fenfluramine is currently being studied in this patient population, and may be an effective treatment option.

Sunflower Syndrome versus Jeavons Syndrome

Individuals with Sunflower syndrome often develop **eyelid myoclonia,** including exhibiting symptoms of eye fluttering and eye rolling, often years before the onset of handwaving episodes.

In this way, Sunflower syndrome shares kinship with Jeavons syndrome.

There is also a **similar age at onset**, typically in the **first decade of life,** both are **more common in females**, both are **generalized epilepsies**, and both are o**ften refractory to treatment**.

Sunflower syndrome and Jeavons syndrome also have similar **interictal and ictal EEG features,** including **polyspikes and spike-wave complexes**.

References

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“Thank You”