A Case of undetected Temporal Lobe Epilepsy presenting with Autonomic symptoms

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CASE SYNOPSIS: This is a case of a 58 year old female who was referred to the services for ongoing low mood and anxiety. She also had bereavement 1 year ago, when her partner of 18 years died unexpectedly- he died in a pool of blood, when his lung tumour ruptured and he had a massive bout of haemoptysis. Later on, ambulance crew had to break the door to gain access to the body.

She witnessed all of this and was noted to be suffering from anxiety and low mood after the incidence, leading to the referral. At the time of the assessment, she was living alone and was concerned about her safety.

She suffered from mild Learning disability and Epilepsy (generalised tonic-clonic seizures and absence seizures–which were diagnosed at the age of eight years). She also had some ASD traits. Her epilepsy had been well-controlled for many years on valproate 600 mg bd.

She also suffered from Raynauds phenomenon, and had sensori-neural deafness. She presented with butterfly rash on face and dry eyes and dry mouth. She could not bear hot weather- there were reports of her collapsing during heat wave.

There was also a mention of other episodes lasting for a few minutes, where she was breathing heavily, foaming at the mouth, looking angry and making grunting noises and she would hit herself. These episodes last for up to ten minutes, and she did not have any recollection of these episodes. There was no loss of consciousness, tongue-biting, cyanosis or incontinence. She reported that she felt hot and experienced headache afterwards.

On assessment, there was no evidence of clinical depression- she was socializing and she participated in the activities organised in the local clubs on a weekly basis. She was concerned about her well being and wished to move to a supported accommodation.

FORMULATION: The general opinion of the MDT was that she was suffering from dissociative features. With limited coping skills and limited emotional expressivity (LD and ASD)- she was not able to cope with the trauma of her partner's death, and was also struggling to come to terms with the circumstances surrounding the death.

However, EEG was requested to rule out any frontal lobe pathology.

EEG FINDINGS: EEG showed symmetrical and reactive alpha rhythm at 9-10 Hz over the posterior regions, with amplitudes reaching upto 55 microV. Beta activity at 15-25 Hz was seen bilaterally, maximal over the precentral regions. There were also intermixed theta (4-7Hz) and delta waves (2-3 Hz) over both hemispheres, maximally over the temporal regions. In addition, fairly frequent irregular slow waves (2-% Hz), upto 65 microV, appeared over the temporal regions.

During hyperventilation (for 3 minutes)- a small increase in slow activity was seen, maximally over temporal regions.

CONCLUSION: It was clear that the episodes that she was suffering from were manifestation of ongoing TLE, presenting with autonomic hyperarousal.

PLAN: Her medication was reviewed and her valproate was increased by 200 mg, noct. Although, valproate is not the choice medication for TLE, but since she lived alone, there were concerns regarding the feasibility to monitor side effects during the lock down period (she had been tolerating valproate for decades without any side effects) - it was reasonable to increase her valproate, rather than to introduce another AED.

She was offered art therapy to enable her to deal with the trauma. Also, currently, there are plans of moving her to a supported accommodation.

TEMPORAL LOBE EPILEPSY:

About 60-70% of focal seizures originate in the temporal lobe. Seizures arising from the temporal lobe typically have a relatively gradual evolution (compared to extra-temporal seizures), develop over 1-2 minutes, have an indistinct onset with partial awareness at the onset, and last longer than most extra-temporal seizures (2-10 minutes).

Often, three components can be seen: aural, ictal and post ictal.

The symptoms during epileptic seizures may be subjective only (epileptic auras, with clear consciousness) or may progress to seizure signs that can be observed and analysed when recorded during video EEG recordings, often associated with impairment of awareness.

AURA – Is a subjective feeling typically involving sensory or psychic phenomena only. It may comprise visceral, cephalic, gustatory, olfactory, déjà vu or affective symptoms and fear. The rising epigastric sensation is the commonest aura, others include perceptual or autonomic auras. Autonomic symptoms include changes in skin colour, blood pressure, heart rate, pupil size, and piloerection. Speech usually ceases or is severely reduced, but occasionally repetitive vocalisation may occur. Simple auditory phenomena such as humming, buzzing, hissing, and roaring may occur if the discharges arise in the superior temporal (Heschl's) gyrus; and olfactory sensations, which are usually unpleasant and difficult to define, can signal the start of seizures in the sylvian region or ento-rhinal cortex.

Aura of focal seizures of lateral temporal lobe origin: Hallucinations (especially auditory) or illusions, but any other temporal lobe aura features may also occur

Aura of medial temporal origin: Visceral, cephalic, gustatory, affective, perceptual or autonomic auras

Features of focal seizures of temporal lobe origin:

- Partial awareness commonly preserved, especially in early stages, and slow evolution of seizure
- Prominent motor arrest with loss of awareness (the 'motionless stare')
- Autonomic changes (e.g. pallor, redness, and tachycardia)
- Automatisms. Often less violent than in frontal lobe epilepsy, and usually oroalimentary (lip-smacking, chewing, swallowing), or gestural (e.g. fumbling, fidgeting, repetitive motor actions, undressing, walking, running) and sometimes of prolonged duration
- Vocalisation also common
- Post-ictal confusion and headache are common after focal seizures with loss of awareness arising from the temporal lobe
- Amnesia is the rule for the blank spell and the automatism
- Secondary generalisation much less common than in extra-temporal lobe epilepsy

Reference: ILAE: Lecture notes: Epilepsy 2017