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**BEHAVIOURAL PROFILE OF ZONISAMIDE IN ADULT PATIENTS WITH EPILEPSY AND NEUROPSYCHIATRIC COMORBIDITY**

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**Objective** Zonisamide is a newer antiepileptic drug indicated as adjunctive therapy in the treatment of adult patients with partial-onset seizures, with or without secondary generalization. Following isolated reports of zonisamide-induced mania, other behavioural adverse effects, including psychosis and suicidal ideation have been associated with its use, and it was suggested that past psychiatric history is among the factors associated with discontinuation of zonisamide therapy in patients with epilepsy. We therefore set out to assess the tolerability profile of zonisamide in this particular group of patients with epilepsy, who are at risk of developing adverse reactions to zonisamide.

**Method** This study investigated the prevalence and characteristics of adverse effects resulting from the use of zonisamide in a retrospective chart review of patients with epilepsy and co-morbid cognitive and/or behavioural problems, recruited from the specialist neuropsychiatry clinic at the National Centre for Mental Health, BSMHFT and University of Birmingham.

**Results** We identified 12 eligible patients (3 males, mean age 36 years, range 16-59 years). All patients had a clinical diagnosis of

treatment-refractory epilepsy (9=temporal lobe epilepsy), supported by neurophysiological and neuroimaging findings, and had concomitant and/or previous antiepileptic medications (11=levetiracetam, 8=carbamazepine, 6=lamotrigine, 6=valproate). In our neuropsychiatric sample, 6 patients had a previous diagnosis of depression, 2 anxiety disorders, 2 learning disability, 2 neurodevelopmental disorders (Tourette syndrome and autism) and 1 psychosis. Co-morbid non-epileptic attack disorder was documented in 4 patients. In the majority of cases, zonisamide (mean maintenance dose=212.5mg daily, range 50-500 mg daily) was well tolerated and behavioural adverse effects were not severe. Three patients (25.0%) discontinued zonisamide over the observation period (mean duration 15 months, range 1-48 months). The main reasons for discontinuation were lack of efficacy on seizure control (two cases) and emerging depression as an adverse effect (one case).

**Conclusion** This preliminary observation of relatively low discontinuation rate of zonisamide in a selected population of patients with epilepsy and neuropsychiatric comorbidity prompts further research to establish whether this medication is a safe treatment option for vulnerable patients with treatment-refractory epilepsy.