Seizures after bupropion overdose

Sir—A woman aged 19 years presented with an altered mental state, agitation, and auditory and visual hallucinations. She had a resting tachycardia and generally increased tone and reflexes. She denied taking recreational drugs.

Shortly after admission she had two brief generalised seizures. A standard toxicology screen showed no cause of these. Because of clinical concern about the possible contribution of 3,4-methylenedioxymethamphetamine (MDMA [Ecstasy]), she was pressed on this issue. She denied recreational drug use but admitted to having taken 3·75 g of bupropion (25 tablets) after a domestic dispute. She had no further seizures and was discharged the next day.

Bupropion is a novel monocyclic antidepressant that was noted incidentally to have a potent effect on reducing nicotine dependence. The drug substantially augments smoking cessation rates and has been licensed in the UK for this purpose. Bupropion and MDMA share common structural similarities with amphetamines and their similarities in overdose are, therefore, unsurprising. The symptoms are thought to be related to dopamine re-uptake inhibition and include hallucinations, seizures, cardiotoxic effects, and death. 1–3

Smoking kills half of all regular tobacco users and, therefore, bupropion is an important new drug. Clinicians in the UK should be aware of its potential for toxic effects, especially in overdose, since widespread media publicity has resulted in a substantial increase in its use in the community.

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