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[Intervention Review]

Alprazolam for essential tremor

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ABSTRACT

Background

Essential tremor (ET) is one of the most common movement disorders. Treatment is based primarily on pharmacological agents. On this basis, although primidone and propranolol are well-established treatments in clinical practice, they could be ineffective in 25% to 55% of patients and can produce serious adverse events (AEs) in a large percentage of individuals. For these reasons, evaluating treatment alternatives for ET may be a worthwhile pursuit. Alprazolam has been suggested as a potentially useful agent for treatment of individuals with ET, but its efficacy and safety are uncertain.

Objectives

Primary

To assess the efficacy and safety of alprazolam in the treatment of individuals with ET.

Secondary

To examine effects of alprazolam treatment on the quality of life of people with ET.

Search methods

We carried out a systematic search without language restrictions to identify all relevant trials. We searched the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE (January 1966 to September 2019), EMBASE (January 1988 to September 2019), the National Institute for Health and Care Excellence (NICE) (1999 to September 2019), ClinicalTrials.gov (1997 to September 2019) and the World Health Organization (WHO) International Clinical Trials Registry Platform (ICTRP) (2004 to September 2019). We handsearched grey literature and examined the reference lists of identified studies and reviews.

Selection criteria

We included all randomised controlled trials (RCTs) of alprazolam versus placebo or any other treatment. We included studies in which ET was diagnosed according to accepted and validated diagnostic criteria. We excluded studies that included patients presenting with secondary forms of tremor or reporting only neurophysiological parameters for the purpose of assessing outcomes.

Data collection and analysis

Two review authors independently collected and extracted data using a data collection form. We assessed risk of bias and the body of evidence. We used inverse variance methods for continuous outcomes and measurement scales. We compared differences between treatment groups as mean differences. We used Review Manager software for management and analysis of data.



Main results

We included in this review one trial that compared alprazolam versus placebo (24 participants). It was judged to have high overall risk of bias. We graded the overall quality of evidence as very low. Compared with those given placebo, participants treated with alprazolam showed a significant reduction in tremor severity (mean difference (MD) -0.75, 95% confidence interval (CI) -0.83 to -0.67). Nine alprazolam-treated participants (75%) developed AEs, mainly represented by sedation (50%), constipation (17%) and dry mouth (9%). No participants in the alprazolam group and no participants in the placebo group discontinued treatment and dropped out of the study.

Authors' conclusions

Currently available data reveal evidence insufficient for assessment of the efficacy and safety of alprazolam treatment for individuals with ET.

PLAIN LANGUAGE SUMMARY

Use of alprazolam for treatment of essential tremor

Essential tremor (ET) is the most common movement disorder. Although benign in term of its effect on life expectancy, it is typically progressive and is potentially disabling. Treatment is based primarily on pharmacological agents (propranolol and primidone as first-line therapy) that could be ineffective in 25% to 55% of patients. Alprazolam has been suggested as potentially useful in ET. The authors of this review tried to assess its efficacy and safety in people with ET. One randomized study, which compared alprazolam and placebo in 24 people with head and/or limb ET, was included. Alprazolam produced a reduction in tremor severity associated with a high frequency of adverse events. However, the small number of studies and evidence of many methodological limitations in the one included study prevent firm conclusions on the benefit-risk profile of this treatment. Further research is needed to confirm efficacy and to assess long-term safety of alprazolam for treatment of patients with ET.