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Riluzole for Pediatric Patients with Treatment-Refractory Obsessive-Compulsive Disorder

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Purpose

Obsessive-compulsive disorder (OCD) occurs in about 1-3% of the pediatric population, but many do not respond to standard therapies. Riluzole, a glutamate antagonist, has shown to be an effective treatment for refractory OCD in adults, however few trials have been conducted to show the effectiveness of Riluzole in children to treat refractory OCD.

The study investigates the potential use of riluzole in children to treat refractory OCD.

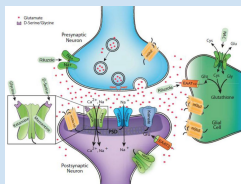


Figure 1: Mode of action of riluzole. Riluzole inhibits release of glutamate via presynaptic sodium channels and increases uptake of extrasynaptic glutamate. Adapted from Ittenger, C., Bloch, M. H., & Williams, K.

Methods

- Literature review was conducted.
- Participants in the pediatric population up to age 17 with confirmed OCD.
- Use of Riluzole as a stand-alone medication or as an adjunct to a standard OCD medication.

Results

Although limited in number, studies have shown mixed results in the use of riluzole to treat OCD in children. Two separate studies both conducted a 12-week, double-blind, placebo-controlled study on children aged 7-17 who had prior failed OCD treatments.

One open label study had 6 participants, in which 4 showed improvement based on the Children's Yale-Brown Obsessive-Compulsive Scale (CYBOCS), and 1 additional child had improvement after the 12 weeks.

A second study looked at 60 children, of which 17 also had autism spectrum disorder, and found improvement based on the CY-BOCS scores compared to the placebo group. However, the results were not statistically significant.

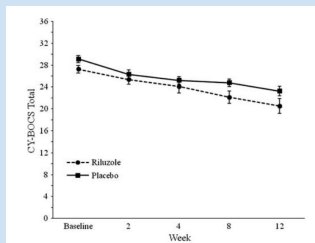


Figure 2: CYBOCS total scores comparing riluzole and placebo group. Adapted from Grant, P. et al.

Conclusion

There has been evidence for the efficacy of Riluzole as an effective adjuvant treatment for refractory OCD in adults. However, similar evidence is lacking with respect to Riluzole's effectiveness in children with refractory OCD.

The few existing studies are limited due to small sample size and numerous confounding variables such as comorbid conditions and each patient's varied medication regimen.

However, the preliminary study illustrates promising benefits for the use of riluzole for refractory OCD in children. More double-blind, randomized control studies need to be conducted in children with mild to moderate OCD.

Citation

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