The Shrewsbury and Telford Hospital NHS Trust

Walsall Healthcare NHS Trust

The Royal Wolverhampton NHS Trust

Audit of Brivaracetam in a Secondary Level Epilepsy Service

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Introduction

A multicentre audit of the use Brivaracetam was carried out. Data were collated from 3 sites, The Royal Wolverhampton NHS Trust, Shrewsbury and Telford Hospitals NHS Trust and Walsall Healthcare NHS Trust.

Aims and objectives

a) to evaluate the prescribing practices of our epilepsy services in regard to this treatment
b) to see if there were differences in the prescribing and effects of this drug in patients with intellectual disabilities (ID).

Methodology

The Partners in Epilepsy (PIE) database holds the clinical details of over 3,900 patients. Within The Royal Wolverhampton NHS Trust PIE produced a list of patients, who have, at any point, tried the audited drug. For Shrewsbury and Telford Hospitals NHS Trust and Walsall Healthcare NHS Trust, internal databases were used. A retrospective analysis of treatment was undertaken. The data was cross-referenced with hospital electronic records and was analysed using an antiepileptic drug audit tool devised by UCB Pharma (2012).

Results

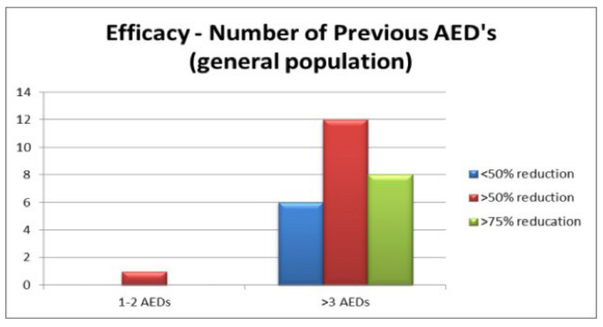
Non ID group (38 patients)

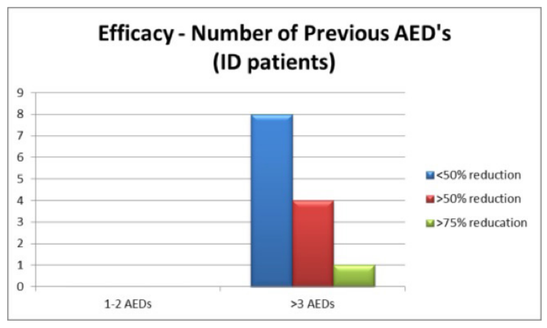
- Highly refractory; 92% had been exposed to more than 3 AED's
- Average time on treatment was 7.5 months
- 81% of patients remained on the drug at the time of audit
- No patients stopped due to lack of efficacy and only 18% of patients stopped due to adverse events, mainly nausea, dizziness, fatigue and low mood.
- 70% of patients had a seizure reduction of at least 50%
- 31% of patients had a seizure reduction of more than 75%
- 6% of patients were seizure free for at least 3 months

ID group (14 patients):

Also highly refractory: All patients had been exposed to more than 3 AED's

- Average time on treatment was 8.5 months
- 100% of patients remained on the drug at the time of audit
- 38% of patents had a seizure reduction of at least 50%
- 8% of patients had a seizure reduction of more than 75%
- 8% of patients were seizure free for at least 3 months



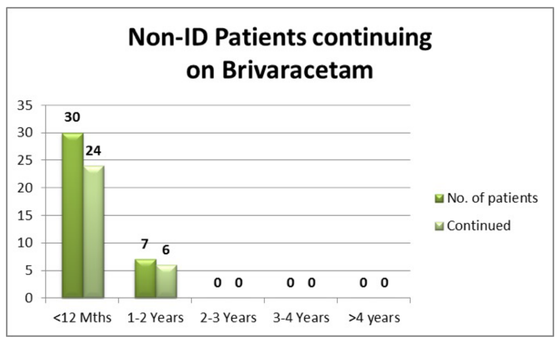


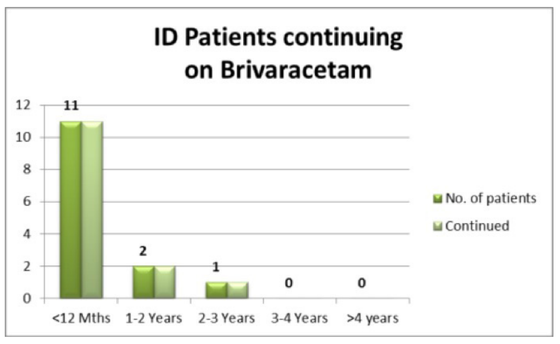
Discussion

Brivaracetam was given to highly refractory epilepsy patients. It was used within licensed indications. In non-ID patients 57% patients had previously tried Levetiracetam with 15% changing directly from LEV to BRI. In ID patients 62% had previously tried Levetiracetam with 31% changing directly. Overall 57% had previously tried LEV which is in line with clinical trial data where 54% had tried LEV previously. (Klein et al 2015). The most common reason for changing from LEV to BRI was related to mood disorders with LEV. Interestingly, mood did not seem to be an issue with BRI with only 2 cases in this audit (both in the non-ID group) citing depression as a reason for discontinuation.

Brivaracetam showed good efficacy in this highly refractory group. Seizure freedom rates were low but this is to be expected in such a refractory group where seizure freedom after the third AED is as low as 2.7% (Mohanraj and Brodie 2013) . However seizure reduction rates were very positive with 70% of non-ID and 38% of ID patients having a greater than 50% reduction in seizures.

The average time on Brivaracetam was 7.5 months for non-ID and 8.5 months for ID patients. In all 3 centres the drug has been on the formulary for less than 18 months, with only one patient using the drug for more than 2 years. Seizure reduction rates were noticeably higher in the non-ID patient group where 70% of patients saw up to 50% reduction in seizures compared to 38% in the ID patient group. However the seizure freedom rates at 3 months were very similar for both cohorts (6% in non-ID, 8% in ID patients).





Conclusion

Brivaracetam has shown efficacy and good tolerability and our experience suggests that it is a suitable add-on treatment for patients with refractory focal epilepsy. The very low rate of discontinuation for mood or behaviour reasons, particularly in the ID patients, indicates that it has the potential to be a positive choice for people with ID where issues have been noted on other medications, most notably Levetiracetam.

In all three sites Brivaracetam has been on trust formulary for less than 18 months. These results are on the whole very positive but it would be important to revisit the data in 12 months to see if the initial positive results are maintained long term.

Another interesting study may be to look at using Brivaraceatam as an earlier choice for add-on treatment. The majority of patients in this study had been tried on over 4 drugs prior to initiation of Brivaracetam.

References

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