A Meta-analysis on the treatment of refractory status epilepticus (RSE)

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Objectives: The objective of this study is to compare the different treatments used to control Refractory Status Epilepticus (RSE) in terms of total control of seizures and adverse events such as duration of mechanical ventilatory support and hypotension.

Background: Refractory Status Epilepticus (RSE) described as ongoing seizures following first- and second-line drug therapy. There is no universal consensus on the treatment of choice for refractory status epilepticus. This study does not aim to provide treatment guidelines but aims to give a systematic review on the available randomized study on the treatment of RSE.

Design/Methods: A review of clinical studies documenting the outcomes of various treatments was undertaken. After assessing the comparability of the researches, data from two (2) selected studies both comparing efficacy of Diazepam to another treatment were used for meta-analysis.

Results: The results from the two studies were summarized and analyzed using a fixed effect model. Based on the data, there was evidence that the success of controlling RSE increased by 12% when Diazepam is used compared to using other treatments (Midazolam or IV Sodium Valporate).

Conclusion: This study showed that up to the present, there is lack of available randomized, clinical controlled trial of treatments for refractory status epilepticus. However, this study is practically helpful in our setting showing that Diazepam infusion, being the least expensive is effective in controlling RSE.

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