Pre-hospital and emergency department treatment of convulsive status epilepticus in adults: an evidence synthesis

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Plain English summary

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Plain English summary

Epilepsy is a common condition that results from abnormal electrical activity in the brain and causes seizures (stiffening and uncontrolled jerking – known as a 'fit'). The most severe form of epilepsy is called 'convulsive status epilepticus', which involves continuous seizure activity for 5 minutes or more, or repetitive seizures without recovery of consciousness.

Convulsive status epilepticus can be very dangerous and requires prompt treatment to avoid hospitalisation and prevent complications. Although several drugs are available for the treatment of convulsive status epilepticus in the community or in the emergency department, it is unclear which one is most effective in stopping seizures.

We brought together results from all available clinical studies that looked at the use of drugs to treat adults with convulsive status epilepticus either before arriving at hospital or on arrival at the emergency department.

In the literature, we found four studies (1234 adults) assessing drugs delivered by paramedics through an injection into a vein or into muscle. In general, the drugs used by paramedics (benzodiazepines) were effective in stopping seizures, but we were unable to identify any particular drug or way of administering it as being more successful than others.

Future research is needed to establish which drugs are most effective and preferable. It is also important to improve adherence to clinical guidelines with regard to the use of these drugs.

For the pre-hospital treatment of convulsive status epilepticus, little evidence was available to decide which drug treatment is the best in terms of value for money. Future studies could assess the (1) impact of treatments on costs and outcomes over the whole course of a seizure episode (2) long-term impact of different treatments on patients' quality of life and (3) health and social care needs.

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This report

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