**Title** : Effectiveness of Midazolam Compared to Diazepam in Seizure Control

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**Introduction**

Benzodiazepine plays important role in early control of seizure especially in paediatric population. We report a case on the effectiveness of benzodiazepines such as diazepam and midazolam in early cessation of fitting.

**Case Presentation**

1 year 2 months old boy weighing in 10kg brought in for generalized tonic clonic seizure for duration of 3 minutes at home till arrival to emergency department. He has temperature of 39.1c heart rate of 165 beats/min, respiratory rate of 50 breaths per minute, dxt of 9.1 and spo2:70% under room air. The toddler was immediately put on HFM 15l/min and then given suppository paracetamol 150 mg and suppository diazepam with total of 10 mg but no resolution of the fitting. However, after Iv midazolam 2mg given in slow bolus, the seizure aborted. Total duration of fitting is about 8 minutes. Post ictally, the toddler regains consciousness, crying, but still drowsy. Upon further questioning from mother, this child was delivered prematurely via caesarean section. The child was also having high grade fever for past 2 days, on regular paracetamol with diarrhoea, vomiting and reduced oral intake for 1 day. His white cell count was 8 x10^9/L, urea 4.9mmol/L, sodium 139 mmol/L, creatinine of 29 umol/L. Currently he was treated as complex febrile fit with acute gastroenteritis with 5% dehydration. He was given IVD maintenance NSD5% 40cc/H with 5% correction of 21cc/H/24H and remain fit free and saturating well under room air.

He was later admitted to paediatric ward.

**Discussion**

In studies shown, for seizure cessation, midazolam by any route was superior to diazepam. In this case midazolam cause cessation of fitting compared to diazepam. It is reported that oral and intramuscular route of midazolam is as effective as intravenous administration of diazepam. Midazolam is preferred due to its rapid onset, short time to peak effect and short duration of action.

**Conclusion**

This case illustrates early seizure control is needed to reduce risk of morbidity and mortality. So, the best type of benzodiazepine such as midazolam is preferrable compared to diazepam as the 1st choice for immediate seizure cessation regardless of the route of administration.