Sodium valproate Intravenous for Adults

Who can administer

May be administered by registered competent doctor or nurse/midwife

Important information

- Valproate is **contraindicated in women of childbearing potential**, unless the conditions of the pregnancy prevention programme are fulfilled- see SPC for details
- Co-administration with carbapenem agents **(e.g.meropenem)** may result in a 60-100% decrease in valproic acid levels within two days- therefore concurrent use is not recommended

Available preparations

Epilim 400mg vial

Reconstitution

Water for Injection (provided) (Draw up using a 5 micron filter needle)

4ml per 400mg vial

Infusion fluids

Sodium chloride 0.9% or Glucose 5%

Methods of intravenous administration

Slow intravenous injection

- Administer over a minimum of 3 to 5 minutes [ref 1] (but see below for rate of administration for **status epilepticus**)
- **Peripheral administration**. Dilute with at least 20mL Sodium chloride 0.9% or Glucose 5%
- **Central line administration**. May be used diluted or undiluted

Intermittent intravenous infusion (Status epilepticus [ref 2])

- Add required dose to 100mL infusion fluid
- Administer over 10 minutes
- High doses via peripheral route may cause extravasation- monitor closely [ref 1]

Intermittent intravenous infusion (Do not use for INITIATION of treatment - can be used for MAINTENANCE doses)

- Volume of infusion not critical (but should be at least 50mL) [ref 1]
- If a 50ml infusion volume is used the residual volume in the infusion line must be flushed through at the same rate to avoid significant underdosing
- Administer as a 60 minute infusion [ref 1]
- Maximum rate of administration 20mg per minute

Continuous intravenous infusion (Do not use for INITIATION of treatment - can be used for

MAINTENANCE doses)

- Volume of infusion not critical (but should be at least 50mL) [ref 1]
- Administer required daily dose over 24 hours

Dose in adults

Status epilepticus [ref 2] **- see table 1 below**

Table 1: Status epilepticus: Valproate dosing (unlicensed)	
Body weight (kg)	**Loading dose 40mg/kg (to a maximum dose of 3000mg)**
40	1600mg
50	2000mg
60	2400mg
70	2800mg
75kg or more	3000mg (max dose)
Flush giving set with 25mL infusion fluid at the same rate to ensure full dose is administered	

Continuation of valproate treatment when oral therapy is not possible

- Use the same IV dose as is currently being given orally

Initiation of valproate therapy (when oral therapy not possible)

- Initially give 10mg/kg (usually 400 to 800mg), by slow intravenous injection....
- Followed by further doses, as deemed clinically necessary, by either intermittent intravenous infusion or continuous intravenous infusion, up to a maximum dose of 2500mg per 24 hours
- The daily dose should be divided into at least two doses

Monitoring

Liver function tests, U&Es and **full blood counts** are recommended prior to initiation of therapy, and then periodically during treatment.

Serum level monitoring

- Serum valproate **levels are of little use** in patient management except in the investigation of non-compliance/adverse reactions - routine monitoring is discouraged
- Optimum dosage is mainly determined by seizure control.
- **If levels are to be taken, please take pre-dose levels, at a consistent time of day**
- Therapeutic range: 40 to 100 microgram/ml (mg/L). This reported range may depend on time of sampling and presence of co-medication.
- An increased incidence of adverse effects may occur with plasma levels above the effective therapeutic range.
- The pharmacological (or therapeutic) effects of valproate may not be clearly correlated with levels

Storage

Store below 25^{0}C

References

SPC January 2024

1. Medusa Injectable medicines guide downloaded 7th March 2024

2. Status epilepticus: GUH treatment algorithm for adults, March 2023

Therapeutic classification

Anti-epileptic