Intravenous PHENYTOIN

PRESENTATION: Ampoules containing 250mg in 5ml, 50mg/1ml of phenytoin sodium.

INDICATION: Treatment of status epilepticus, prophylaxis of seizures.

DOSE AND ADMINISTRATION:

Continuous monitoring of ECG and blood pressure during administration is essential.

Loading dose: 20mg/kg, maximum dose 2000mg. If haemodynamically unstable consider giving loading dose in two divided doses.

Maintenance dose: Initially if <80kg 100mg every 8 hours, if ≥ 80kg 100mg every 6 hours. Obese patients may need larger doses.

Peripheral administration:
Phenytoin is irritant if administered peripherally and therefore ideally it should be diluted. See ICU standard infusion below. ***To avoid local irritation, flush the peripheral line with sodium chloride 0.9% before and after administration. Administer via a large vein.***

Central administration:
Phenytoin may be administered centrally without dilution, at a maximum rate of 50mg/minute but it is preferable to administer more slowly to minimise the hypotensive effects e.g. 100mg over 3-5 minutes, 1000mg over 60 minutes. If diluted as per the standard infusion, the solution can be administered over 60 minutes (but no greater than 60 minutes due to physical incompatibility of the infusion). ***To avoid local irritation, flush the catheter with sodium chloride 0.9% before and after administration.***

An administration rate of 25mg/minute or lower may be appropriate in some patients, including those who are elderly or have heart disease.[6]

ICU STANDARD INFUSION

Loading doses and maintenance doses should be diluted in sodium chloride 0.9% to a maximum concentration of **10mg/ml** i.e. maximum of 1000mg in 100ml, doses greater than 1000mg dilute in 250ml. Infuse through a 0.22-0.5 micron in-line filter. Use as soon as infusion is mixed and only use if it is free from haziness and precipitate.

STABILITY: Physically and chemically stable for a maximum of one hour once diluted.

ADDITIONAL NOTES: Phenytoin is not stable in glucose 5%.
**If using the Hikma brand note that there are dose regimens and administration rates in the product information which do not reflect those used in UK clinical practice. However in the UK it is routinely used according to UK practice. The manufacturer of the Hikma injection does not recommend dilution, although it is unlikely this preparation is more susceptible to precipitation than others.[6]

References

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4. Adult Medical Emergencies Handbook. Ed Dr GRNimmo. NHS Lothian.2009/11.
5. NHS Improvement Patient Safety Alert: Risk of death and severe harm from error with injectable phenytoin (November 2016).
6. Intravenous-Adult, Phenytoin sodium. NHS Lothian UK IV Guide.Version 11. http://intranet.lothian.scot.nhs.uk/Directory/MedicinesManagement/DrugsTherapeutics/Documents/Guidelines/NHS%20Lothian%20UK%20IV%20Guide.pdf Accessed 21/08/2024.

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