Lothian Critical care Directorate Guidelines

ALTEPLASE thrombolysis of massive pulmonary embolism

PRESENTATION:

Alteplase (rtPA) 50mg vials containing powder for reconstitution.
Vials of solvent : water for injections 50ml.

INDICATION:

- Massive PE proven on CTPA, with persistent hypotension despite adequate fluid resuscitation, or in patients where cardiac arrest is imminent.

- Suspected massive PE in patients where cardiac arrest is imminent and who are too unstable for CTPA, and in whom alternative diagnoses are unlikely. Echocardiography may be of value in suggesting a diagnosis in this group of patients, particularly if there is evidence of right ventricular dilatation and interventricular septal displacement.

CAUTIONS:

Recent CPR.
Recent obstetrical delivery.

CONTRA-INDICATIONS:

- Active gastrointestinal/gastric ulcer bleeding.
- Major surgery, trauma or head injury within past 3 months.
- Bleeding diathesis.
- Known history of ischaemic stroke or transient ischaemic attack in the preceding 6 months, except current ischaemic stroke within 3 hours.
- Known history of or suspected intracranial haemorrhage.

For full list of contraindications, see current Summary of Product Characteristics.[1]

DOSE AND ADMINISTRATION:

ICU STANDARD INTRAVENOUS INFUSION

Give a bolus of alteplase, 10mg IV over 1-2 minutes, followed by an infusion of 90mg over 2 hours.
Please note total dose should not exceed 1.5mg/kg if patient's weight is less than 65kg.

Reconstitute two 50mg vials with 25ml of solvent each. Withdraw 5ml to give the 10mg bolus. Withdraw 45ml to give the 90mg infusion.

Commence IV unfractionated heparin post alteplase infusion, once the APTT ratio is less than 2.0, at a rate of 1000units/hour (no loading bolus dose should be given).

Check APTT 6 hours after starting IV heparin, and aim for ratio of 1.5-2.5.

CONCENTRATION:

2mg/ml

STABILITY:

After reconstitution, solution stable for 8 hours at 25°c.

ADDITIONAL INFORMATION:

Ensure adequate intravenous access is established, and take blood for group and save.

The reconstituted solution may be diluted in sodium chloride 0.9% solution up to a minimal concentration of 0.2mg/ml.

References

1. Actilyse. Summary of Product Characteristics.www.medicines.org.uk. Accessed March 2008.
2. BNF. No.55. March 2008.

Adapted from guideline produced by Dr C Kelly/Respiratory Medicine in February 2005
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