Management of Extravasation of Cytotoxic Agents

Objective

To assist cytotoxic credentialed Registered Nurses and Medical Staff in managing suspected or actual extravasation injuries appropriately to minimise tissue damage.

Purpose

A number of cytotoxic agents have the potential to cause progressive and severe tissue damage and necrosis if extravasation occurs. This guideline offers best practice guidance on dealing with extravasation of cytotoxic agents based on review of current practice in other centres and the current literature available.

Personnel Authorised to Perform Procedure

Cytotoxic credentialed Registered Nurses
Medical Staff

Associated Documents

- Volume 12 Fluid and Medication Manual CDHB
- Cytotoxic and Biotherapies Website
- Extravasation Flowchart
- Cytotoxic Drug Extravasation Form
- Cytotoxic Extravasation Follow up Form
- Incident Form
- Patient Information for Extravasation

Definitions

Cytotoxic agent – a drug which has the ability to kill or arrest the growth of living cells. May have carcinogenic, mutagenic or teratogenic effects

Extravasation – the inadvertent leakage or escape of a drug or solution from a vein or unintentional injection into surrounding healthy tissue.

Necrosis – tissue death

Irritant – a drug or solution which has the potential to cause pain and inflammation

Vesicant – a drug or solution which has corrosive properties and has the potential to cause tissue destruction in the event of extravasation

General Statements

Extravasation may be suspected when:

- The flow rate of infusing fluids reduces
- Blood return from the access device is sluggish or absent
- Pain at the intravenous site
● Erythema, swelling and tenderness may occur
● Blistering and/or induration may occur
● Ulceration and necrosis are late signs

If extravasation is suspected follow the instructions within this document or on the extravasation flowchart within the extravasation kit.

Consider antidotes with the pharmacist and medical officer.

- Currently sufficient evidence exists to consider use of Dexrazoxane for anthracycline extravasations.
- General considerations with Dexrazoxane use:
  - Treatment should be initiated within 6 hours of extravasation occurring
  - Dexrazoxane dose is 1000mg/m² on days 1 and 2 and 500mg/m² on day 3
  - Dexrazoxane is reconstituted as an emergency through the Baxter facility as it is mutagenic/teratogenic, see Mosaiq (Oncology) or Red Book (Haematology) for prescription
  - Renal impairment (<40ml/min) consider dose reduction of 50%
  - DMSO and hydrocortisone use should be avoided as this may reduce Dexrazoxane efficacy
  - Cooling cares should cease at least 15 minutes prior to administration to allow blood flow to the area.

Complete the appropriate documentation.

Educate patient on intervention to be undertaken by them at home, including completion of patient information sheet on extravasation

Follow up visit with nurse on day 2 must occur; day 3 may be a visit or phone call. On subsequent day’s clinical judgement will decide if a phone call or visit is required.

If assessment visit or phone call is required over weekend this should be arranged with the appropriate ward and the documentation sent prior to the weekend

If a confirmed extravasation place alert on PMS system and place sticker in clinical notes. Sticker states “ALERT – Previous Extravasation Injury.

**Equipment**

- Syringe 5 ml x 2
- Syringe 10 ml x 2
- Blunt access cannula x 4
- Gauze squares x 2 packets
- Alcohol/Chlorhexidine wipes x 4
- Appropriate pack (warm or cold) depending on cytotoxic drug involved
- Antidote administration as indicated
- Appropriate documentation
References


