

MANAGEMENT OF EXTRAVASATION: TREATMENT SUMMARY

- Extravasation suspected – resistance or absence of free flow, swelling, discomfort, burning, pain. STOP the injection immediately, but leave the cannula in place.
- Aspirate as much fluid as possible through the cannula, try to draw back about 3-5ml of blood.

- Contact the patient's doctor.
- Remove the cannula.
- Mark the extravasation area with a pen.
- Classify the agent using the tables below and treat as directed.

Vinca alkaloids

Vinblastine
Vincristine
Vindesine
Vinorelbine

Vesicant drugs

Amsacrine
Bendamustine
Hydrochloride
Carmustine
Dacarbazine
Dactinomycin
Daunorubicin
Doxorubicin
Epirubicin
Idarubicin
Mitomycin
Mustine
Paclitaxel
Plicamycin
Streptozocin
Treosulphan

Extreme pH, osmolality, or toxic excipients

Aciclovir	Hypertonic glucose (10% or greater)
Allopurinol	Hypertonic saline (1.8% or greater)
Aminophylline	Magnesium sulphate
Amiodarone	Mannitol
Amphotericin	Methohexitone
Calcium chloride	Methylene blue
Calcium gluconate	Parenteral nutrition
Ciprofloxacin	Phenytoin
Clarithromycin	Potassium chloride (>40mmol per litre)
Co-trimoxazole	Sodium bicarbonate
Diazepam	Thiopentone
Erythromycin	Vancomycin
Etomidate	X-ray contrast media
Foscarnet	
Ganciclovir	

Exfoliant or Irritant drugs

Aclarubicin	Oxaliplatin
Arsenic Trioxide	Raltitrexed
Busulphan	Teniposide
Carboplatin	Topotecan
Cisplatin	Trastuzumab
Cloretazine	
Daunorubicin (liposomal)	
Docetaxel	
Doxorubicin (liposomal)	
Etoposide	
Etoposide phosphate	
Floxuridine	
Fluorouracil	
Irinotecan	
Methotrexate	
Mitoxantrone	

Vascular regulators

Adrenaline
Alprostadil
Dobutamine
Dopamine
Epoprostenol
Noradrenaline

Neutral drugs

Aldesleukin
Asparaginase
Bleomycin
Bortezomib
Cladribine
Clofarabine
Cyclophosphamide
Cytarabine
Fludarabine
Gemcitabine
Ifosfamide
Interferons
Melphalan
Monoclonal antibodies
Nelarabine
Pemetrexed
Pentostatin
Thiotepa

Aim: spread and dilute

- Reconstitute 1500iu of Hyaluronidase with 1ml Water for Injection.
- Give this Hyaluronidase solution in 0.1- 0.2ml subcutaneous injections at 6 to 8 sites around the circumference of the extravasation area.**
- Apply a HOT pack for 24 hours. Remove the pack every 3 hours for 20 to 30 minutes replace with a fresh pack.
- Apply Hydrocortisone Cream 1% four times a daily for as long as erythema persists.

Aim: localisation 1.

- For bendamustine hydrochloride, carmustine, mustine, paclitaxel and treosulphan treat as in 'Aim: localisation 2'. For all other vesicant drugs treat as detailed below.
- Apply a thin layer of DMSO 50% cream to the marked area immediately using a cotton bud and cover with gauze. Avoid contact with unaffected skin.
- Repeat DMSO application every 2 hours for 24 hours then every 6 hours for 7 days.
- Immediately after first DMSO application apply COLD pack for 30 minutes. Repeat every 4 hours for 24 hours.
- 3 hours after first DMSO application apply hydrocortisone 1% cream. Repeat every 6 hours for 7 days.

Aim: localisation 2.

- Apply cold pack for 30 minutes every 4 hours for 24 hours.
 - Apply hydrocortisone cream 1% every 6 hours for 7 days or as long as erythema persists'
- NB for liposomal daunorubicin / liposomal doxorubicin treat as in 'Aim: localisation 1' but delay DMSO application until 8 - 12 hours post incident and continue for 10 - 14 days. Commence treatment with hydrocortisone 1% cream and COLD pack immediately.**

Aim: symptomatic treatment

- Apply hydrocortisone cream 1% four times each day if erythema is present

DOCUMENTATION

- Inform the patient's consultant
- Complete a Cardiff and Vale NHS Trust Incident Record Form (HS/IDO/02).
- Document the extent of extravasation in the patient's medical notes. Consider including a photographic record of the injury and treatment progress.
- Complete an extravasation report (Green Card) and post or complete on-line at <http://www.extravasation.org.uk/Documentation.html>
- Return opened extravasation kit to pharmacy for replacement.

- Check the site regularly and review at least twice daily, initially. Then according to the severity of the injury and progress.
- The treatment proposed above is "first aid" only. Seek further advice – early review by plastic surgeon is advisable.**

Further information

More detailed information may be obtained from the National Extravasation Information Service: <http://www.extravasation.org.uk/home.html>

EXTRAVASATION KITS ARE AVAILABLE

UHW - Ambulatory Care : Sky Ward : Heulwen : Paediatric South Ward : HDC : A7 : B4 Haem : GITU : A&E : ICU : Dermatology : C2 : C7 : B5 : Nephrology OP Clinic : C4 Neurosciences : Upper Ground Gynaecology : A1 Ophthalmology : Rheumatology OP Clinic : Main Theatres : A5 OP Clinic : Pharmacy Emergency Cupboard.

LLAN - Chemotherapy Day Unit : ICU : MAU : Pharmacy Emergency Cupboard : Theatres Ground Floor