

Guidelines For Treatment of Contrast Interstitial Extravasation

PURPOSE: To produce guidelines for CDHA for prevention and treatment of interstitial injection of radiological contrast medium that minimize patient risk.

1. **Define Interstitial Contrast Injection**

Any obvious complaints of pain or swelling at a contrast injection site post injection.

2. **Define Patients at Risk**

All patients receiving intravascular contrast material both intravenous and intraarterial both in the CT or MRI scanner or other sites within the hospital.

3. **Risk Stratification Based Bibliography:**

- a) All flow rates but particularly the higher rates for CT vascular studies.
- b) Peripheral injection sites (e.g. hands, feet, forearms or calves).
- c) Smaller bore (<18 gauge) intravascular catheters.
- d) Higher volume injections (e.g. contrast plus mixed contrast and / or saline following boluses).

4. **Patient Subgroups to Consider Separately:**

- a) Those with decreased pain or cognitive function.
- b) Concern about quality of the intravascular access.
- c) Ideally metal needles should be strictly avoided for power injections.

5. **When to Employ Preventive Measures:** N/A

6. **Risk Reduction Strategies/Preventive Measures:** N/A

7. **Treatment:**

- a) Elevate the affected limb above the level of the heart and maintain that position as long and often as reasonable.
- b) Apply ice for 15 minute intervals at least 5 times per day while ensuring no cold tissue damage results. There is no good evidence for the use of heat in the treatment.
- c) There is no good evidence that massage or manual expression or aspiration of fluid improves the outcome.
- d) Inform the attending physician.
- e) Make some estimate of extravasation volume and content (e.g. contrast type, concentration and if additional substances (e.g. saline, air, blood etc.) were included.
- f) There is no good evidence that hyaluronidase injections are of any advantage with the osmolality of routinely used present non-ionic contrast materials.
- g) There is no supportive evidence for routine or estimated extravasation volume (e.g. >150 cc's) plastic surgery consultation.
- h) Any severe occurrences of very tight skin or blistering at site or distal limb sensation changes or progressively increasing pain do require plastic surgery consultation, for assessment of the potential of developing compartment syndrome or concern about viability of skin at the site.
- i) Pain medication should be considered. (from ASA up to and including use of narcotics)
- j) Discharge timing is based on symptoms.
- k) The application of cold and limb elevation should continue if swelling persists post discharge.

8. **Follow Up:**

Usually not required and should be based on symptoms.

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