

# BWH Radiology Documentation

Document Number
7.4.4SOP

Title		
Contrast Administration – Protocol for Intravenous Contrast Medium Infiltration		
Document Type	Revision Code	Page Number
Standard Operating Procedure	B	1 of 4
PRESUMES PRACTITIONERS KNOWLEDGE OF: (title)	SPECIAL NOTES	
NA	<b>ABSOLUTE CONTRAINDICATIONS: NA</b>  <b>EXPOSURE: NA</b>  <b>PROTECTIVE EQUIPMENT: NA</b>  <b>PATIENT/FAMILY EDUCATION MATERIALS: NA</b>  <b>EQUIPMENT: NA</b>	

## 1.0 PURPOSE

- 1.1 Prevention is the key to avoiding this complication. Close and careful observation of the IV site when contrast material is being injected is essential. Identifying patients who are at greater risk for an infiltration may help to prevent this complication. Only Technologists and nurses who have completed the IV contrast administration competency may administer IV contrast medium.

## 2.0 SCOPE

NA

## 3.0 RESPONSIBILITIES

NA

## 4.0 DEFINITIONS

NA

## 5.0 POLICY / PROCEDURE

- 5.1 Extravasation of contrast material is a well-recognized complication of contrast-enhanced imaging studies. Even large extravasated volumes are generally not significant in most patients, but in the pediatric age group or in patients with poor perfusion at the injection site, extravasation can lead to skin sloughing or other tissue injury.
- 5.2 The severity and prognosis of the injury are difficult to determine on initial evaluation of the affected site, hence, close clinical follow-up for several hours is essential. Documentation (supplement XI) and patient orientation are essential (supplement XII).

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Refer to 2.1.1SOP for instructions on using this form	Document Number: 7.4.4SOP	REV: B

# BWH Radiology Documentation

Document Number

7.4.4SOP

Title		
Contrast Administration – Protocol for Intravenous Contrast Medium Infiltration		
Document Type	Revision Code	Page Number
Standard Operating Procedure	B	2 of 4

## 5.3 Patients at Risk for Infiltration

- 5.3.1 Patients who are unable to tell you there is a problem with the IV (e.g., elderly, confused, unconscious patients or patients who have sensory-perceptive defects paralysis/parasthesis of IV site extremity).
- 5.3.2 Patients with abnormal circulation to the extremity used for injection (e.g., patients with diabetes mellitus, peripheral vascular disease, deep vein thrombosis and stroke)
- 5.3.3 Patients who are receiving chemotherapy through the IV access.

## 5.4 Immediate Treatment

- 5.4.1 Elevation of the affected extremity is often useful to reduce edema by decreasing the hydrostatic pressure in capillaries.
- 5.4.2 Application of cold compress for 15-60 min three times a day for 1-3 days, until symptoms resolve, as cold produces vasoconstriction and limits inflammation.
- 5.4.3 Follow up on the patient's condition until resolution.

## 5.5 Surgical Consultation

- 5.5.1 Surgical consultation is recommended when there is extravasation of:
  - 5.5.1.1 100 ml or more of low osmolality contrast media (LOCM).
  - 5.5.1.2 60 ml LOCM in the wrist, ankle or dorsum of the hand.
  - 5.5.1.3 If the patient is totally asymptomatic careful evaluation and appropriate clinical follow-up are usually sufficient.
- 5.5.2 Immediate surgical consultation is indicated for any patient in whom one or more of the following signs or symptoms develop:
  - 5.5.2.1 Increased swelling or pain after 2-4 hours.
  - 5.5.2.2 Altered tissue perfusion as evidenced by decreased capillary refill at any time after the extravasation has occurred
  - 5.5.2.3 Change in sensation on the affected limb
  - 5.5.2.4 Skin ulceration or blistering

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# BWH Radiology Documentation

Document Number

7.4.4SOP

Title		
Contrast Administration – Protocol for Intravenous Contrast Medium Infiltration		
Document Type	Revision Code	Page Number
Standard Operating Procedure	B	3 of 4

## 5.6 Protocol for IV Contrast Medium Infiltration

- 5.6.1 Stop contrast infusion and remove the catheter/needle.
- 5.6.2 Notify the radiologist immediately
- 5.6.3 Elevate the site above the level of the heart
- 5.6.4 If the amount of the infiltration is greater than 5mls, observe the patient for up to 2 hours. Observe for progression/worsening of symptoms.
- 5.6.5 Initially apply alternating cold and warm packs to injection site; 15 minutes on followed by 15 minutes off. Repeat x 6 during observation period.
- 5.6.6 Consider consultation with a plastic surgery if any of the following occurs:
  - 5.6.6.1 The patient's skin blisters
  - 5.6.6.2 Site continues to hurt after 2 hours
  - 5.6.6.3 There is a change in extremity temperature distal to infiltration site
  - 5.6.6.4 There is a change in extremity sensation distal to infiltration site
  - 5.6.6.5 There is a change in circulation (diminished/lost pulse) distal to infiltration site
  - 5.6.6.6 All outpatients should be sent home with a copy of "[Intravenous Contrast Extravasation Home Care Instructions](#)"
  - 5.6.6.7 RT will document the extravasation in the *IDX comment field*.
  - 5.6.6.8 The Radiologist who dictates the report will document the extravasation in both the *body and impression of the radiology report*.
  - 5.6.6.9 Inform a Lead Tech or Supervisor for all extravasations
  - 5.6.6.10 Complete and return [Contrast Medium Infiltration Report](#) to Division Chief Technologist

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