

**NATIONAL INSTITUTES OF HEALTH
WARREN GRANT MAGNUSON CLINICAL CENTER
NURSING DEPARTMENT**

Standards of Practice: Care of the Patient Undergoing Intravenous Ophthalmic Angiography

I. Essential Information:

- The nurse administering the ophthalmic dye must successfully completed the Eye Clinic knowledge and skill competency prior to performing the procedure.
- Preferred IV access site is the antecubital vein. If this site is unavailable, use large arm veins. Do not use any central venous access device (CVAD). Avoid veins on hands and fingers.
- IV angio catheters made of polyurethane (i.e. PROTECTIV™ PLUS or Saf-T-Intima™) are preferred over stainless steel winged infusion set devices (e.g.: butterfly or scalp vein device)
- Use ONLY 10 cc syringes
- Flush catheter with normal saline before and after Fluorescein and Indocyanine Green (ICG) injection.

II. Assessment prior to dye administration

1. Confirm the presence of the Physician order, photography and camera request
2. Verify that informed consent document is signed, witnessed & dated
3. Assess prior angiography history (i.e. reaction & side effects to ophthalmic dye)
4. Assess seizure history and any medical condition that would affect angiography procedure.
5. Assess patient for venous access
6. Provide patient education for procedure and potential side effects
7. Verify that emergency medications are readily available in the area where patient will receive treatment.

III. Interventions prior to angiography

1. Obtain and record baseline vital signs
2. Ensure emergency equipment is available in patient's room:
 - a. Normal saline flush solution
 - b. Oxygen
 - c. Suction machine
 - d. Vital sign monitor
2. Assist patient with correct head positioning for camera, arm positioning for IV access, and holding eye lids open as needed during the taking of pre-Fluorescein/ICG photographs of the retina
3. Insert IV and obtain any ordered lab work
4. Perform extravasation test; see Appendix A: Extravasation Management for Fluorescein & ICG.

IV. Assessments during Fluorescein and/or ICG Administration

1. Assess IV site for s/s of extravasation, e.g., pain, redness, edema, difficulty with flushing and discharge
2. Assess patient for tolerance of procedure

V. Interventions during Fluorescein and/ or ICG administration

1. Administer dye, then flush with 10 cc Normal Saline.

2. Assist patient with head positioning & keeping eye lids open during the taking of photographs immediately post infusion of dye.
3. Take vital signs 15 minutes post dye infusion.
4. Continue monitoring vital signs q 15 minutes until stable if the patient experiences any untoward signs/symptoms: i.e. nausea, chest pain, rash, itching, vasovagal response.
5. Notify MD if patient develops rash, hives, SOB, chest pain, syncope or has a vasovagal reaction
6. Provide discharge instructions after procedure is complete.

VI. Discharge Criteria

1. Verify that vital signs are within 20 % of baseline before discharge.
2. Assess that there are no serious adverse reactions.
3. Provide teaching to patient, family member, or significant others about post procedure care. Provide written information to support teaching.

VII. Documentation

1. Document according to medication procedure.
2. Complete an adverse reaction report for extravasations using the occurrence reporting system

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Approved:

Clare E. Hastings, RN, Ph.D
Chief, Nursing and Patient Care Services

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CIS/7/20/00 **APPENDIX A: Extravasation Management for Fluorescein**

Fluorescein is acidic and considered an irritant to human tissue.

Extravasation Test

1. Attach a syringe of Fluorescein to the tubing of the peripheral IV.
2. Withdraw patient's blood to the hub of the Fluorescein fluid level in the syringe.
3. Ensure presence of small air bubble (less than or equal to 0.1cc) separating the Fluorescein from the patient's blood.
4. Slowly re-inject patient's blood and then the Fluorescein, continuously watching the IV site over the needle tip.
5. Do not inject Fluorescein if any of the following occur at the IV site: bulging at the IV site, complaints of pain, difficulty in flushing, or redness.

Extravasation Event

1. If extravasation occurs, stop dye administration, aspirate any residual drug from IV device, then remove IV device.
2. Place sterile gauze over IV site and apply ice pack
3. Notify MD in the event of an extravasation.
4. Advocate for immediate pain management.
5. Draw around the circumference of the extravasation with pen or marker and note time of event.
6. Measure the lesion at its greatest width and length.
7. Monitor q 5 minutes for first 15 minutes the extravasation area for increased circumference, changes in skin integrity, severity of pain, mobility and numbness/tingling of extremity.
8. Identify and implement a follow-up plan of care.