

ASORN Recommended Practice: Intravitreal Injections

Purpose:

To establish guidelines to ensure the safe, efficient, and effective administration of intravitreal injections.

Statement:

Intravitreal injection is a common procedure in the field of ophthalmology. As significant advances in retinal drug delivery continue, so do attempts to assess and establish common practice for standards like topical antibiotic use and contraindications related to intraocular pressure readings. This recommended practice is designed to provide guidance for best practices for the ophthalmic professional during intravitreal injection procedures.

Procedure for intravitreal injections:

Action	Rationale
1. Identify the correct patient, procedure, and eye(s).	Follow the standards of time-out, safety first.
2. Obtain signed informed consent.	Follow institutional policy for risk management.
3. Verify any medication allergies.	This prevents known adverse drug reactions.
4. Wash hands.	Standard Precautions and good hand hygiene must be used to prevent cross-contamination or the introduction of contaminants into the eye.
5. Explain the procedure to the patient.	This helps to establish trust and ensure patient safety.
6. Perform visual acuity testing.	This assessment is performed to establish a baseline before the procedure.
7. Perform intraocular pressure (IOP) testing per physician order prior to eye dilation.	Eye dilation can cause a small rise in IOP; therefore, IOP measurement should always be performed prior to dilation to establish a baseline.
8. Dilate the eye(s) per physician order. Follow the Three Checks for Medication Confirmation and the Seven	The Three Checks for Medication Confirmation are performed: 1. When reaching for the container,

<p>Rights of Medication Administration.</p>	<ol style="list-style-type: none"> 2. After obtaining and comparing it with the physician orders, and 3. When replacing the medication in the drawer or before administration to the patient. <p>The Seven Rights of Medication Administration are the Right:</p> <ol style="list-style-type: none"> 1. Patient 2. Medication 3. Dose 4. Time 5. Route 6. Reason 7. Documentation
<p>9. Verify adequate dilation of the eye(s) if applicable.</p>	<p>Retinal examinations require dilation of the eye(s) for proper visualization.</p>
<p>10. Assemble equipment. Follow physician orders and the institution's policy and procedure. Supplies commonly used for this procedure include:</p> <ul style="list-style-type: none"> • Sterile drape (per physician preference) • Sterile gloves (per physician preference) • Mask (per facility policy) • Sterile 19-gauge 1½ inch, 5.0-micron filter needle (used only to withdraw medication from vial) • Sterile 30-gauge ½ inch needle for intravitreal injection (or 31-gauge ½ inch needle) • Sterile 1-ml tuberculin syringe (with or without Luer-lok) per physician preference • Sterile cotton-tipped applicator • Povidone iodine prep • Sterile speculum • Sterile caliper (per physician preference) • Tono-Pen • Mayo stand if required • Alcohol prep pads 	<p>This facilitates the injection procedure. Follow the directions for use for needles, syringes, and Tono-Pen, per physician orders.</p> <p>Use infection control/Standard Precautions. It is common practice to use filter needles when drawing up medication for intraocular injection to prevent inadvertent introduction of particulate matter into the eye.</p>
<p>11. Verify the medication orders and expiration dates of the following to prepare for the procedure.</p> <ul style="list-style-type: none"> • Topical anesthetic (i.e., topical 	<p>The Three Checks for Medication Confirmation are performed:</p> <ol style="list-style-type: none"> 1. When reaching for the container, 2. After obtaining and comparing it

<p>proparacaine or topical lidocaine ophthalmic gel 3.5%)</p> <ul style="list-style-type: none"> • Povidone iodine solution (per physician order) • Topical antibiotic drops (per physician order) • Intravitreal medication (per physician order) 	<p>with the physician orders, and</p> <ol style="list-style-type: none"> 3. When replacing the medication in the drawer or before administration to the patient. <p>The Seven Rights of Medication Administration are the Right:</p> <ol style="list-style-type: none"> 1. Patient 2. Medication 3. Dose 4. Time 5. Route 6. Reason 7. Documentation
<p>12. Always wash hands before administration of medications. If instilling more than one drop, utilize appropriate technique to prevent contamination (i.e., do not touch medication bottle after patient contact unless hand hygiene has been performed).</p>	<p>Standard Precautions and good hand hygiene must be used to prevent cross-contamination or the introduction of contaminants into the eye.</p>
<p>13. Instill topical anesthetic and topical antibiotic per physician order/preference.</p>	<p>This maximizes patient comfort and minimizes risk of infection.</p> <p>The Three Checks for Medication Confirmation are performed:</p> <ol style="list-style-type: none"> 1. When reaching for the container, 2. After obtaining and comparing it with the physician orders, and 3. When replacing the medication in the drawer or before administration to the patient. <p>The Seven Rights of Medication Administration are the Right:</p> <ol style="list-style-type: none"> 1. Patient 2. Medication 3. Dose 4. Time 5. Route 6. Reason 7. Documentation
<p>14. Place patient in reclining or supine position.</p>	<p>This facilitates the injection procedure.</p>
<p>15. Wash hands, and don mask and gloves per facility policy. Note: Facility policy may not require masks during the</p>	<p>Standard Precautions and good hand hygiene must be used to prevent cross-contamination or the introduction of</p>

procedure; however, there is a no-talking policy after the time out is completed.	contaminants into the eye. Avoid contamination of the field with moisture droplets from speaking.
16. Perform periocular skin prep per physician order.	The use of aseptic technique helps minimize the risk of cross-contamination or the introduction of contaminants into the eye.
17. Using aseptic technique, prepare the medication for administration following manufacturer's directions for use.	Use infection control/Standard Precautions. It is common practice to use filter needles when drawing up medication for intraocular injection to prevent inadvertent introduction of particulate matter into the eye.
18. Perform time out per institutional policy.	Follow the standards of time out, safety first.
19. Physician inserts sterile speculum if applicable.	Sterile speculum keeps the eye open during the procedure.
20. Instill one drop of ophthalmic povidone iodine solution per physician order. This instillation may be done by the physician.	This helps prevent intraocular infection. The Three Checks for Medication Confirmation are performed: <ol style="list-style-type: none"> 1. When reaching for the container, 2. After obtaining and comparing it with the physician orders, and 3. When replacing the medication in the drawer or before administration to the patient. The Seven Rights of Medication Administration are the Right: <ol style="list-style-type: none"> 1. Patient 2. Medication 3. Dose 4. Time 5. Route 6. Reason 7. Documentation
21. The physician may use a sterile caliper to measure the site for injections (approximately 3.5 mm posterior to the limbus for phakic eyes). The physician verifies the medication, dosage, eye(s), and site before the injection is given.	This precaution helps avoid retinal perforation. Follow the standards of time-out, safety first. The Three Checks for Medication Confirmation are performed: <ol style="list-style-type: none"> 1. When reaching for the container, 2. After obtaining and comparing it

	<p>with the physician orders, and</p> <ol style="list-style-type: none"> 3. When replacing the medication in the drawer or before administration to the patient. <p>The Seven Rights of Medication Administration are the Right:</p> <ol style="list-style-type: none"> 1. Patient 2. Medication 3. Dose 4. Time 5. Route 6. Reason 7. Documentation
22. The physician injects the medication into the eye and may stabilize the eye with a sterile cotton-tip applicator and place pressure on the injection site as the needle is removed.	This practice may enhance stabilization and hemostasis.
23. Instill an antibiotic drop per physician order/preference.	This may help prevent intraocular infection.
24. The physician removes the speculum.	The speculum keeps the eye open during the procedure.
25. Check the injected eye for at least count fingers (CF) vision immediately after the procedure. If the patient has less than CF vision, notify the physician per facility protocol. (The physician may perform this vision test or delegate it to facility staff.	This test is done to verify optic nerve perfusion.
26. Advise the patient to report increased pain or decreased vision. Also inform the patient that it is normal to see transient floaters or bubbles as a result of the medication.	Patient teaching promotes good patient outcomes.
27. Review discharge instructions with the patient. Provide the patient with a written copy and a follow-up appointment.	This facilitates compliance.
28. Clean room and nondisposable instruments according to facility policy. Refer to <i>ASORN Care and Handling of Ophthalmic Microsurgical Instruments</i> .	This is done per basic infection control measures.

29. Remove gloves. Wash hands.	This is performed per basic infection control/Standard Precautions.
30. Document procedure(s) performed and medication administered per facility policy.	This is done for the purposes of risk management and continuity of care.

Always use a new syringe and needle to enter medication vials.

Always follow the manufacturer’s directions for storage and use.

Always follow facility policy and procedure.

Never draw up a medication and lay the syringe down without labeling it.

Never use a medication if its sterility is in question.

NOTE: The ophthalmic community lacks consensus regarding the use of topical antibiotics and intraocular pressure results that would be a contraindication for intravitreal injections.

References

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