Management of Adult Adverse Events in Medical Imaging

Mild – Moderate – Severe Adverse Events

- ☐ Stop contrast (if applicable)
- ☐ Ensure safe access to patient – move patient and equipment if needed
- ☐ Assess Patient for Responsiveness and Vital Signs
  - Circulation: Pulse Check. If pulseless, start CPR
  - Airway: Bronchospasm, Wheezing
  - Breathing: Hypoxic, Tachypnea, difficulty breathing
- ☐ Activate code: State "Code Blue (pediatric) and exact location"
- ☐ Prepare Oxygen 100% at 15 L/minute when patient:
  - Responsive: Non-rebreather mask
  - Unresponsive: Oral airway and AMBU bag
- ☐ Prepare suction equipment: turn on suction, connect catheter to tubing
- ☐ Maintain IV access: 16 to 18 gauge IV with sodium chloride 0.9% 1000 mL
- ☐ Retrieve crash cart or modified drug kit, as required
- ☐ Monitor Vital Signs: ECG, Blood Pressure, Pulse Oximeter

Severe Life Threatening Adverse Events

IV = intravenous, IM = intramuscular, SC = subcutaneous, PO = by mouth

SEVERE

Adverse Event	Medications	Patient Comfort / Therapy
Hypotension with Tachycardia	If symptoms persist or progress, • **sodium chloride 0.9% 1000 mL IV rapid infusion**	**Trendelenburg position with legs raised**
Pulmonary Edema	• **furosemide 40 mg IV over one minute** • **nitroglycerin spray 0.4 mg sublingual**	**Place patient in semi-recumbent position**
Chest Pain with Hypertension	• **nitroglycerin spray 0.4 mg sublingual**	**Place patient in semi-recumbent position**
Convulsions / Seizures	• **midazolam 2 to 5 mg IV direct** *OR* • **midazolam 5 to 10 mg IM**	**Maintain airway** **Place patient in recovery position unless intubated**
Anaphylaxis / Anaphylactoid	• **epinephrine 0.5 mg IM** May treat at 5 minute intervals as required	**Maintain airway**

MODERATE

Angioedema	• **epinephrine 0.5 mg IM** May treat at 5 minute intervals as required Once condition stabilized: • **hydrocortisone 100 to 500 mg IV direct/IM** May repeat every 2 to 6 hours. Max rate 200 mg/minute *OR* • **methylPREDNISolone 100 to 500 mg IV direct/IM** • **diphenhydrAMINE 25 to 50 mg IV** Administer slowly over 2 to 3 minutes	**Place patient in semi-recumbent position**
Bronchospasm /Wheezing	• **salbutamol 5 mg via nebulizer** *OR* • **salbutamol 100 mcg/puff, inhale via spacer** 2 to 3 slow deep inhalations as needed for symptom relief If symptoms persist or progress, • **epinephrine 0.5 mg IM** May repeat at 5 minute intervals, as required. Maximum total dose 3 mg	**Place patient in semi-recumbent position** **Auscultate chest**
Hypotension with Bradycardia	If symptoms persist or progress, • **atropine 0.5 to 0.6 mg IV** May repeat at 5 minute intervals, as required. Maximum total dose 3 mg	**Trendelenburg position with legs raised**

MILD

Contrast Extravasation (Refer to LMMI Contrast Media: Extravasation Procedure)	☐ **Observe and reassure patient to reduce anxiety** ☐ **Monitor patient for increased swelling and pain at the site** ☐ **Mark area with an indelible marker** ☐ **Elevate effected limb above the level of the patient's heart**	☐ **Document site/side, contrast type and contrast dose** ☐ **Provide patient with extravasation information sheet** ☐ **Advise patient on pain management options**
Vomiting	If persistent, consider antiemetic • **dimenhyDRINATE 25 to 50 mg IV** *OR* • **ondansetron 4 to 8 mg IV**	**Observe and reassure patient to reduce anxiety**
Urticaria (rash/hives)	If symptoms persist, consider antihistamine • **diphenhydrAMINE 25 to 50 mg PO/IM/IV** Treatment can be supplemented with steroids • **prednisone 50 mg PO** If severe symptoms develop • **epinephrine 0.5 mg IM** May repeat at 5 minute intervals, as required • **hydrocortisone 100 to 500 mg IV direct/IM** May repeat every 2 to 6 hours. Max rate 200 mg/minute *OR* • **methylPREDNISolone 100 to 500 mg IV direct/IM**	**Observe and reassure patient to reduce anxiety**

Urgent Medical Review and Follow-Up

- Request appropriate referrals
- Ensure patient chart is available for immediate review and update as required
- Document in Patient Safety and Learning System (PSLS)

Copyright © 2023 Vancouver Coastal Health. Reproduction without permission is strictly prohibited

VCH.0825 | JAN.2023