Management of Acute Reactions in Adults

Hypotension with Bradycardia
(Vagal Reaction)

1. Monitor vital signs
2. Legs elevated 60° or more (preferred) or Trendelenburg position
3. Secure airway: give O_2 6-10 liters / min (via mask)
4. Secure IV access: rapid fluid replacement with Ringer's lactate or normal saline
5. Give atropine 0.6 mg IV slowly if patient does not respond quickly to steps 2-4
6. Repeat atropine up to a total dose of 0.04 mg / kg (2-3 mg) in adult
7. Ensure complete resolution of hypotension and bradycardia prior to dischange

Hypertension, Severe

1. Give O_2 6-10 liters / min (via mask)
2. Monitor electrocardiogram, pulse oximeter, blood pressure
3. Give nitroglycerine 0.4-mg tablet, sublingual (may repeat x3) *or* topical 2% ointment, apply 1 in. strip
4. Transfer to intensive care unit or emergency department
5. For pheochromocytoma – phentolamine 5 mg IV

Seizures or Convulsions

1. Give O_2 6-10 liters / min (via mask)
2. Consider diazepam (Valium®) 5 mg (or more, as appropriate) or midazolam (Versed®) 0.5-1 mg IV
3. If longer effect needed, obtain consultation; consider phenytoin (Dilantin®) infusion – 15-18 mg / kg at 50 mg / min
4. Careful monitoring of vital signs required, particularly of pO_2 because of risk to respiratory depression with benzodiazepine administration
5. Consider using cardiopulmonary arrest response team for intubation if needed

Pulmonary Edema

1. Elevate torso; rotating tourniquets (venous compression)
2. Give O_2 6-10 liters / min (via mask)
3. Give diuretics – furosemide (Lasix®) 20-40 mg IV, slow push
4. Consider giving morphine (1-3 mg IV)
5. Transfer to intensive care unit or emergency department
6. Corticosteroids optional

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Urticaria

1. Discontinue injection if not completed
2. No treatment needed in most cases
3. Give H_1-receptor blocker: Diphenhydramine (Benadryl®)
   PO / IM / IV 25-50 mg
   If severe or widely disseminated:
   Alpha agonist (arteriolar and venous constriction)
   Epinephrine SC (1:1,000) 0.1-0.3 ml = 0.1-0.3 mg
   (if no cardiac contraindications)

Facial or Laryngeal Edema

1. Give alpha agonist (arteriolar and venous constriction):
   Ephinephrine SC or IM (1:1,000) 0.1-0.3 ml (= 0.1-0.3 mg)
   or, if hypotension evident,
   Epinephrine (1:10,000) slowly IV 1 ml (= 0.1 mg)
   Repeat as needed up to a maximum of 1mg
2. Give O_2 6-10 liters / min (via mask)
   If not responsive to therapy or if there is obvious
   acute laryngeal edema, seek appropriate assistance
   (e.g., cardiopulmonary arrest response team)

Bronchospasm

1. Give O_2 6-10 liters / min (via mask)
   Monitor: electrocardiogram, O_2 saturation (pulse oximeter),
   and blood pressure.
2. Give beta-agonist inhalers: bronchiolar dilators, such as
   metaproterenol (Alupent®), terbutaline (Brethaire®), or
   albuterol (Proventil®, Ventolin®) 2-3 puffs; repeat prn.
   If unresponsive to inhalers, us SC, IM or IV epinephrine
3. Give epinephrine SC or IM (1:1,000) 0.1-0.3 ml
   (= 0.1-0.3 mg) or, if hypotension evident,
   Epinephrine (1:10,000) slowly IV 1 ml (= 0.1 mg)
   Repeat as needed up to a maximum of 1 mg

Alternatively:

Give aminophylline: 6 mg / kg IV in D5W over
10-20 minutes (loading dose), then 0.4-1 mg / kg / hr,
as needed (caution: hypotension)

Call for assistance (e.g., cardiopulmonary arrest response team)
for severe bronchospasm or if O_2 saturation < 88% persists.

Hypotension with Tachycardia

1. Legs elevated 60° or more (preferred)
   or Trendelenburg position
2. Monitor: electrocardiogram, pulse oximeter, blood pressure
3. Give O_2 6-10 liters / min (via mask)
4. Rapid intravenous administration of large volumes of
   isotonic Ringer's lactate or normal saline.

If poorly responsive:

Epinephrine (1:10,000) slowly IV 1 ml (= 0.1 mg)
(if no cardiac contraindications)
Repeat as needed up to a maximum of 1 mg

If still poorly responsive seek appropriate assistance
(e.g., cardiopulmonary arrest response team)