Clinical Pathway

Adult and Pediatric Allergy and Anaphylaxis

Updated: February, 2013

DIAGNOSIS OF SEVERE ALLERGIC REACTION/ANAPHYLAXIS:	-Skin or mucosal (hives, pruritus, oral edema) -Respiratory (cough, dyspnea, stridor, wheezing, hypoxia) -Cardiovascular (hypotension, near-syncope, syncope, hypotonia) -GI (nausea, abdominal pain, vomiting, diarrhea) **Epinephrine is indicated for two organ-system organ involvement, even without airway compromise.**
Outcomes/Goals	**1.** Identification and treatment of patient with anaphylaxis or severe allergic reaction including recognition of early signs and initiation of prompt action **2.** Create an interdisciplinary, consistent approach to treatment and care **3.** Provide patient education regarding allergic reaction, prevention and management of future allergic reactions.
NURSE Documentation	Chief complaint. Allergies; Onset of symptoms. History of prior allergic reactions; medication history; medical history. General appearance including: respiratory assessment (SOB, wheezing strider, hoarseness, hypoxia), Cardiovascular assessment (pulse , hypotension); integumentary assessment (redness, hives etc.);
INTERVENTIONS Initiate on arrival	ESI Triage level II or III Full set of vitals per standard of care Continuous pulse oximetry if SaO2 ≤ 95% and continuous cardiac monitoring Oxygen to maintain SaO2 > 92% Insert IV x 1 If respiratory distress, hypotension insert 2 large bore IV For wheezing or respiratory distress initiate Albuterol 2.5 mg nebulizer For hypotension initiate NS 1L or 20 ml/kg IV bolus
DIAGNOSTICS	Consult with LIP for indications before ordering. May include: • CBC with differential • BMP / CMP – draw and hold. Send if indicated/physician order • Chest x-ray • ABG/VBG/Lactate • ECG if concern for cardiac component
PHYSICIAN (LIP)	**REMOVE OFFENDING AGENT IF POSSIBLE**
Medication	
Epinephrine	**Epinephrine** (1:1000): **Adult:** 0.3 mg IM to thigh every 5 minutes up to 3 doses **Peds:** 0.01 mg/kg (max 0.3 mg/ dose) to thigh every 5 min up to 3 doses **Epinephrine IV infusion:** (0.02 mg/mL) 0.01-0.1 mcg/kg/min if patient is refractory to multiple IM epinephrine doses
Antihistamines	**H1 Blocker: Diphenhydramine** **Adult:** 50 mg IV or Oral **Peds:** 1 mg/kg (max 50mg) IV or Oral **H2 Blocker: Famotidine** **Adult:** 20 mg IV infused over 15 minutes **Peds:** 0.5 mg/kg IV (max 20 mg) infused over 15 minutes
Steroids	**Dexamethasone** **Adult:** 10 mg IV / Oral **Peds:** 0.6mg/kg (max 10 mg) IV/ Oral **Methylprednisolone** **Adult:** 125 mg IV
	Wheezing/Bronchospasm: Albuterol 2.5mg nebulizer, prn wheezing max three doses **Stridor: Racemic epinephrine** (2.25%) nebulized 0.5 mL every 20 minutes prn stridor max two doses

B-Blocker use (adult only)	**Glucagon** 1mg IV q 5 min prn anaphylaxis max two doses **Glucagon** IV infusion 5-15 mcg/min. Use only for patients who are hypotensive on epinephrine drip and who respond to the glucagon bolus.
CONSULTS	IP consult anesthesia (if concerns about difficult airway with imminent need for intubation) IP consult trauma surgery (if concerns about need for surgical airway)
DISPOSITION	D/C home if mild or moderate reaction with complete resolution of symptoms. -If responded quickly to epinephrine, but initial presentation concerning, recommend observation for 4-6 hours after improvement of symptoms. -If received nebulized racemic epinephrine, consider a period of observation after last dose -If severe reaction, patient required multiple doses of epinephrine, or persistent symptoms, unreliable care takers/patient, consider admit to obs or hospital admission. -If epinephrine drip started, admit to ICU. -Biphasic anaphylaxis: up to 20%, if h/o delayed reaction → observation or admission.
DISCHARGE	**DISCHARGE PRESCRIPTIONS** Dexamethasone has the advantage of 1 day vs three day dosing and lower cost (1 and 4 mg tabs are on most $4 lists). The disadvantage is the need to crush the tablet into food to mask the bitter taste for patients who cannot swallow pills. **Adult:** Dexamethasone tablet 12mg po x 1 day **Pediatric:** Prednisolone liquid 1.5 mg/kg x 3 days or dexamethasone 0.6mg/kg tablets max 12 mg, (4mg tablets crushed in food) x 1 day **Adult:** Diphenhydramine 25-50 mg po q6hr prn x 2 days **Pediatric:** Diphenhydramine 1 mg/kg po q 6 hr prn x 2 days max 50mg Epipen x 2 (for patients ≥30 kg), prn anaphylaxis Epipen jr x 2 (for patients 15-29 kg), prn anaphylaxis

Adult and Pediatric Allergy and Anaphylaxis Rationale and Data
Goals of Clinical Pathway **1.** Identification and treatment of patient with anaphylaxis or severe allergic reaction including recognition of early signs and initiation of prompt action **2.** Create an interdisciplinary, consistent approach to treatment and care **3.** Provide patient education regarding allergic reaction, prevention and management of future allergic reactions.

Data Consideration	Interventions	Rationale
Medication	Beta Blockers	Some beta blockers may inhibit or block response to epinephrine. Administration of glucagon may be considered
	Epinephrine	Epinephrine can cause acute hypertension. Caution should be taken when administering epinephrine to individuals with hyperthyroidism, hypertension, heart disease or arrhythmias, asthma or emphysema, or with recent cocaine use and in pregnancy
	Epinephrine	Research indicates that IM administration of epinephrine has a faster rate of absorption in comparison to SC administration
Assessment	History	The more rapidly anaphylaxis develops the more likely the reaction is to be severe and potentially life threatening. Symptoms not immediately life-threatening might progress rapidly unless treated promptly and appropriately.
	Integumentary	Urticaria and angioedema are the most common manifestations of anaphylaxis and often occur as the initial signs of severe anaphylaxis. These findings, however, may be delayed or absent in rapidly progressive anaphylaxis

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