Anaphylaxis

Anaphylaxis is a hypersensitivity or an allergic reaction. Today we know that anaphylaxis can vary in severity from mild to life threatening. It can involve any or all of the systems listed inside the kit, which include the SKIN, G.I. TRACT, CARDIOVASCULAR & RESPIRATORY SYSTEMS.

Ninety per cent of all reactions involve the skin and manifest as urticaria, erythema and pruritis. As well, there is involvement of the upper respiratory tract as nasal congestion, sneezing with cough, hoarseness or a sensation of tightness in the throat which may prewarn of angioedema. Dyspnea will be present during bronchospasm or upper airway oedema - hard to know whether you are dealing with upper or lower respiratory problem. Stridor (crowing) will signal upper and wheezing is lower.

Oedema of the upper airway is life threatening and must be dealt with immediately with a dosage of adrenalin.

Eyes may itch and tear.

Prior exposure is not essential for anaphylaxis

Hypoxia and hypertension may cause weakness , dizziness or syncope. Chest pain may be due to bronchospasm or myocardial ischemia.

Gastro intestinal symptoms of cramp like abdominal pain with nausea and vomiting or diarrhea.

Anaphylaxis- Immediate and Delayed (Biphasic)

One of the most important aspects of anaphylaxis is that it is unpredictable and is not caused by a single mechanism. It is most important to monitor closely all patients suspected of an anaphylactic reaction and not to rely solely on antihistamines for treatment.

Extreme exercise is known to be an aggravating factor in people with asthma.

Anaphylaxis should be viewed as a cavalcade of allergic calamities. A major event which follows many lesser reactions. The reaction may stretch out over months or years. The immediate reaction is due to histamine release from

mast cells and basophils. The delayed reaction is also known as a biphasic response is caused by the release of eosinophils (inflammatory cells).

In general, the faster the onset of symptoms from initial exposure to the allergen, the more intense is the ultimate response. Also, once the signs and symptoms appear, if they increase quickly in severity, there is a greater chance of the reaction becoming life threatening.

Causes of Anaphylaxis:
2% - latex allergy
20%- injection of drug (local, IV, IM, oral, antibiotics)
34%- food
37%- idiopathic
7% - exercise and stress

Differential Diagnosis:

Vasovagal- most commonly follows needle injection- pallor, nausea, lightheadedness, profuse sweating, seizures, syncope.

Myocardial Infarction - chest pain or discomfort, weakness, cold sweat, apprehension, dyspnea.

Seizure Disorder - light flashes, buzzing, flushing, convulsive jerking, tingling, impaired consciousness, parasthesia

Insulin Reaction- tachycardia, palpitations, sweating, weakness, shaking, nausea, mental confusion, bizarre behaviour, coma.

Shock - Distributive shock is in evidence in cases of anaphylaxis- The fluid volume in the circulatory system is decreased as the fluids move into the tissues. Signs and syptoms include decreased B/P, tachycardia,cool extremeties, absence of peripheral pulses, restlessness, confusion, lethargy, coma.

Treatment - Short and Long Term Management

Maintain adequate airway and support blood pressure.
First line therapy- O2 for all patients.
Prevention is obviously preferred and thus a thorough medical history is essential, Do not challenge a patient who claims to have an allergy to a particular drug. Send for testing.