



ANAPHYLAXIS

Introduction

Severe allergic disease is on the increase, and the pattern of allergy is changing. In the 1930's over 50% of deaths were due to horse anti-tetanus serum, by the 1970's penicillin anaphylaxis accounted for 72% of deaths and more recently peanut related allergy has been noted as a real problem.

Recognition of Acute Anaphylaxis

1. History

- Previous anaphylactic reaction attendants/friends/relatives will often know what is happening.
- Recent contact with allergen e.g. peanut, antibiotic, bee sting.

2. Signs and symptoms

- Sense of malaise and impending doom
- Generalised rash with itch
- Sneezing / rhinitis
- Laryngeal obstruction
- Wheeze and acute dyspnoea
- Nausea, vomiting and diarrhoea
- Tachycardia, palpitations, hypotension
- Loss of consciousness
- Cardiac arrest

Three cardinal diagnostic signs of anaphylactic shock are:

- **Wheeze and/or stridor**
- **Tachycardia/Hypotension**
- **Urticarial rash**

Note that the rash may be absent in up to 30% of cases.

Anaphylaxis often responds quickly to medical intervention but is so variable in its clinical course that relapses can occur many hours after the first presentation. For this reason all patients treated for anaphylaxis should be transferred to hospital even if there is a dramatic response to treatment.

Differential Diagnosis

Angio oedema

Non itchy, deep tissue swelling affecting face and mouth/upper airway mediated by complement and kinins, not histamines. May be hereditary, due to a deficiency of C1 esterase inhibitor (HAE) – this will not respond to adrenaline, and an early surgical airway should be considered. Can be drug induced (ACE Inhibitors) or acquired (lymphoma, SLE).

Urticaria

Classical rash, mediated by histamine and leukotriene release. Can have non-allergic cause including stress, infections and auto immune disease. In the absence of respiratory or cardiovascular compromise the patient should not be treated for anaphylaxis.

Treatment

IMMEDIATE 100% Oxygen and establish IV access.

Intra-muscular adrenaline 0.5mg (0.5ml 1:1000). (Children: 0.01ml/kg)

In patients known to be taking beta-blocking drugs, monoamine oxidase inhibitors or tricyclic antidepressants, the dose of adrenaline is halved.

The adrenaline is repeated approximately every 5 minutes if there is no response from the previous doses.

IV adrenaline (0.5ml of 1:10,000) can be given in carefully titrated doses by those used to administering it this way. It should however be avoided in the conscious patient.

FURTHER MANAGEMENT

IV Fluids 250ml boluses in adult to effect. Children 20ml/kg boluses.

IV Chlorpheniramine 10mg (slowly, to avoid drug induced hypotension).
(Paeds 0.1mg/Kg)

Nebulised salbutamol 5mg is useful if there is bronchospasm.

IV Hydrocortisone 100mg to prevent late recurrences.

As stated earlier, many patients show a dramatic response to initial treatment. All patients suspected of having an anaphylactic reaction should be transferred to hospital because of the risk of delayed deterioration.

Monitoring is applied during transfer.

Note: the patient may have their own adrenaline. Epipens are triggered by pushing the pen down on the leg, Anapens have a trigger on the top. Adult epipens contain 300mcg adrenalin and paediatric ones 150mcg.

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