Recognition and treatment of Anaphylaxis

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Anaphylaxis - Aims & Objectives

- To raise awareness of the causes of Anaphylaxis
- To recognise the signs & symptoms of an Anaphylactic reaction
- To manage and administer appropriate treatment to patients suffering an Anaphylactic reaction
Definition of Anaphylaxis

- Anaphylaxis in a severe, life threatening allergic reaction to a substance which would normally be considered harmless.

- Incidence of anaphylactic reactions are increasing. On average there are around 20 deaths per year in the UK.
Common Triggers

**Food**
- Seafood
- Nuts/Fruit
- Medication
- Eggs/Diary
- Colouring agents

**Injected**
- Insect stings
- Drugs
- Contrast Media

**Inhaled**
- Pollen
- Dust
- Spores

**Contact**
- Latex
Fatal reactions

In severe, life threatening cases, symptoms tend to appear rapidly. When anaphylaxis is fatal, death usually occurs very soon after contact with the trigger:

- Food fatalities can cause respiratory arrest within 30 minutes
- Insect stings can cause death from shock within 15 minutes
Anaphylaxis – What Happens?

Antibodies are produced in response to the trigger. These antibodies activate specialist cells which release massive amounts of chemicals throughout the body.
Signs & Symptoms

Early signs often include swelling and a skin rash

- Severe swelling of the lips, tongue, around the eyes.

Widespread red itchy rash will be present in most cases.
Signs & Symptoms

Chemicals released cause problems with the airway, breathing and circulation.

- The Airway swells and causes difficulty with breathing
- The Bronchioles constrict causing difficult, noisy breathing and/or a wheeze
- Blood vessels dilate and small blood vessels leak fluid causing the blood pressure to drop, child may feel faint or collapse.
Signs & Symptoms

MILD:
- Flushed Appearance
- Urticaria
- Anxiety
- Headache
- Nausea
- Abdominal pain
Signs & Symptoms

MODERATE :-
- Feeling of Impending Doom!
- Swelling
- Difficulty breathing
- Wheeze
- Stridor
- Fast heart rate

Classic features
- Swelling of lips
- Rash
Signs & Symptoms

SEVERE :-

- Swelling of the throat
- Hypoxia (oxygen starvation)
- Hypotension (drop in Blood Pressure)
- Decreased level of consciousness
- Respiratory or cardiac arrest
Immediate Treatment

- Remove the trigger if known e.g. Remove sting, Don’t make vomit!

- Call an Ambulance state child is having an Anaphylactic reaction

- Lie child down with or without legs raised. Do not sit or stand them up if feeling faint, this can cause cardiac arrest!

- Administer Adrenaline ‘Auto Injector’ IM if available

- Recovery position if unconscious
Adrenaline 1:1000 IM

Epipen and Anapen Auto-Injectors

Doses
- Adult: 0.3ml
- Child: 0.15ml

By Intra Muscular injection

Only ever use an Auto-injector for the child for whom it is prescribed

Adrenaline can be administered by anyone without a prescription for the purpose of saving life!
Auto Injectors
Adrenaline

- Intra Muscular is the route of choice, Auto-Injectors must be administered in the thigh muscle.

- When given early on Adrenaline should begin to reverse symptoms within 1 minute

- Repeat in 5 minutes if no clinical improvement

- In most cases of death, adrenaline has either not been given or given too late!
Transfer to Hospital

- Any child having had a severe Anaphylactic reaction must be taken to the nearest District General Hospital by ambulance.

- 20% have a biphasic reaction.

- The child must be transferred by stretcher, prevent risk of empty ventricle syndrome.
Points to consider in School

- Deter sharing food e.g. tuck, celebration food, lunch
- Staff awareness catering staff, people accompanying school trips etc
- Teaching potential problems e.g. cookery, science experiments, handling animal or bird foods
Prevention is the best policy

Each child should have an individual advice sheet for their specific signs & symptoms
Gain consent from parents to:

- Administer the emergency injection
- Seek co-operation of other parents i.e. to avoid sending snacks containing the potential trigger to school
- Talk to peers about their child’s allergy
- Keep a photo of the child in the staff room to enable identification
Storage & Disposal

- Auto-injectors should be kept in an easily accessible, safe location.
- All staff should be aware of the location.
- If used, do not touch the needle.
- Once used, place in a rigid container and give to ambulance staff.
Further Information

- www.resus.org.uk
- www.allergyfoundation.com
- www.asthma.org.uk
- www.eczema.org
- www.allergyadvice.co.uk
- www.allergyinschools.org.uk
  (Anaphylaxis Campaign)
Summary

- We have raised awareness of the causes of Anaphylaxis.
- We can recognise the signs & symptoms of an Anaphylactic reaction.
- We can manage and administer appropriate treatment to patients suffering an Anaphylactic reaction.