MANAGEMENT OF ANAPHYLAXIS IN SCHOOLCHILDREN

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KEY POINTS

Potentially severe allergic reactions to food, particularly peanuts, are causing much anxiety for parents of at-risk school age children. This is fuelled by dramatic media reports. From the medical side, management consists of identification of at-risk children, avoidance of the responsible antigen and ready availability of appropriate medication. Of equal importance, parents should receive consistent advice and written information in an easily understood format.

The hospital and community paediatric teams in Lancaster and Kendal, together with school nurses, are working together to deliver a consistent management package for these children at home and school.

WHAT IS AN ANAPHYLACTIC REACTION?

There is no agreed definition. In Britain the term is used to describe the severity of the allergic symptoms:

Mild/Moderate

Tingling of lips
Strange taste in mouth
Swelling of lips
Red blotchy face
Swelling of eyes
Abdominal discomfort
Vomiting
Mild/moderate wheeze
Nettle sting rash

Anaphylaxis = severe

Severe swelling of tongue/
airway, causing breathing
problems
Severe asthma
Blue around lips
Very pale
Violent vomiting
Collapsed/unconscious/shocked

This is a useful division, as management is based on symptom severity.

FACTS

- We have no national strategy or guidelines for the management of anaphylaxis. Conflicting advice is therefore often received.
- The British Paediatric Surveillance Unit (BPSU) is currently running a reporting scheme to estimate the incidence of severe/fatal reactions to food.
- There is, to date, no documented case of a child <12 years of age dying from an anaphylactic reaction to food or venom in the UK.
- There is good evidence that the symptom severity for an

individual will be similar or less on a subsequent occasion, though may be worse if more of the food is ingested.

- In a five-year study in the UK 1992-1997, there were 150 fatal cases of anaphylaxis. Fifty percent of these occurred in hospital following an injection. On average there were only 12 cases per year which occurred in the community. All these deaths were secondary to severe respiratory obstruction or shock, and the majority occurred in unstable adult asthmatics on inhaled steroids.
- Allergic reactions to egg and milk tend to improve with time. Although peanut allergy was previously thought to be life-long, some children are outgrowing it. It is more likely to persist in children with asthma requiring steroids.
- Because earlier advice was often inappropriate there are likely to be several children in the community who have an adrenaline pen. It is important that these children be reassessed and the appropriate medication and package of care prescribed.

AIMS OF MANAGEMENT

- Parents and school receive consistent advice.
- The most appropriate treatment be used. This means an oral antihistamine for a mild/moderate reaction. Adrenaline is prescribed only following an anaphylactic reaction or for a persistent severe reaction after 11 years of age, particularly in an asthmatic child.
- Parents are advised that an oral antihistamine should be used if the child is able to swallow it. A liquid preparation via a syringe is more appropriate for the younger child. A bronchodilator should be used if there is wheeze.
- Parents must understand the management plan, and be happy with it.
- A school doctor/nurse takes the information to school and updates it regularly.
- It is the parents' responsibility to ensure that appropriate medication is available at school.
- The names of all at-risk children are forwarded to Dr David Stacey (Community Paediatrician, Longlands), who arranges school input.
- All children in possession of an adrenaline pen will be seen two-yearly in the allergy clinic (Dr Monica Placzek). It is particularly important that a review takes place prior to entry to secondary school, so that the need for

School Treatment Plan for Acute Allergic Reaction

The main objective should be for your child to lead a normal life
with normal school and play activities, unstigmatised by the allergy.

Name of Consultant

Date of last hospital visit

Name of school

Allergic to

1. Prevention of contact

- * in class e.g. nuts in domestic science, art
- * at play e.g. bird feeders
- * eating – don't eat other children's food!

2. The child, all staff and carers must know where treatment plan and medication are

Medication: *Inhaler*
Antihistamine
Epipen

* Excursions – medication and treatment plan must
accompany child at all times.

3. What to do if allergic reaction:- Most reactions are mild. No child below 12 years has ever had a fatal reaction.

Symptoms may vary from one person to another.

*Put in position most comfortable for child – this may be sitting or lying down. *Encourage relaxation. * Don't panic.

Signed Parent	Needs updating annually
Teacher	Date

It is the parents' responsibility to give this completed form to the school.

Figure 1

adrenaline can be addressed, and appropriate input given to the new school.

- All children with peanut allergy will be reviewed in clinic prior to secondary school entry. If the allergy persists, then adrenaline will be prescribed.

PRACTICAL MANAGEMENT OF THE ‘AT-RISK’ CHILD

In order that all at-risk children can be identified, we request that they be referred to the allergy clinic. Of particular importance are those children in possession of an adrenaline pen.

This clinic is run by school nurse Lyn Read, hospital nursing staff led by Sister Lesley Ryan, and Monica Placzek. Skin prick-tests, bloods and food-challenge are done by the nursing staff.

Individual assessments are provided and appropriate management plans devised. Written guidelines are drawn up for parents and teachers to follow should a reaction occur (Figure 1). This is signed by parents who take it in to school for the teacher to countersign. Copies are sent to the child’s GP and Dr Stacey who provides school input.

Each child will therefore leave clinic with an individual management plan, an advice sheet “Allergic and

Anaphylactic Reactions to Food” (Figure 2 for drug details), practical advice on drug administration (oral antihistamine ± Epipen) and follow-up arrangements.

It is parents’ responsibility to ensure that up-to-date medication is available for the child at all times. It is always stressed that reactions are more likely to occur when away from home eg hidden peanuts in ice cream, bee sting on a school outing. It is therefore essential that the medication and instructions accompany the child at all times.

Medication PIRITON/CHLORPHENIRAMINE = ANTIHISTAMINE BY MOUTH ● Syrup = 2mg in 5ml ● Tablet = 4mg (can be crushed)	
Age	Dose for acute reaction
6 → 12 months	5ml syrup
1 → 5 years	5ml or half tablet. May repeat dose if poor response
6 → 12 years	1 tablet or 10ml syrup
12 years +	2 tablets
Notes: It is easier to use a syringe than a teaspoon for syrup Piriton tablets are easy to crush Piriton has a long shelf life, but check expiry date Side effects of Piriton are drowsiness, sleeping, unsteadiness It is, however, a very safe drug	

Figure 2 Example of antihistamine drug sheet given in clinic