NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

SCOPE

1 Guideline title

Drug allergy: diagnosis and management of drug allergy in adults, young people and children

1.1 Short title

Drug allergy

2 The remit

The Department of Health has asked NICE: 'To produce a clinical guideline on Drug allergy: diagnosis and management of drug allergy in adults and children

3 Clinical need for the guideline

3.1 Epidemiology

a) The World Health Organisation (WHO) uses the following definition of a "drug": "A term of varied usage. In medicine, it refers to any substance with the potential to prevent or cure disease or enhance physical or mental welfare, and in pharmacology to any chemical agent that alters the biochemical physiological processes of tissues or organisms". The European Commission further define a medicinal product as, "any substance or combination of substances presented as having properties for treating or preventing disease in human beings; or any substance or combination of substances which may be used in or administered to human beings either with a view to restoring, correcting or modifying physiological functions by exerting a pharmacological, immunological or metabolic action, or to making a medical diagnosis."

b) An adverse drug reaction is defined by the European commission as "a response to a medicinal product which is noxious and unintended". ADRs can be classified into reactions, which may affect anyone (type A) and reactions which, affect only susceptible individuals (type B). Within the definition of drug allergy we have also included any reaction presenting with symptoms commonly associated with immune-mediated reactions such as urticarial, angioedema or asthma because the mechanism at presentation may not be evident from clinical history. True hypersensitivity reactions are immune-mediated and classified into Gell and Coombs categories. Drug allergy requires prior exposure to the same or a cross-reacting compound (sensitization) at a dose tolerated by the majority of individuals. Therefore there may not be a history of prior exposure to the specific drug. A variety of mechanisms underpin the allergic symptoms, experienced with subsequent courses of drug.

c) Diagnosing a drug allergy is challenging, with considerable variation in service provision, practice and referral pattern. This can lead to under-diagnosis, misdiagnosis and self-diagnosis.

d) There is no robust information on the prevalence or incidence of drug allergy alone in the UK population. Information is available for adverse drug reactions of which drug allergy is a subgroup, and anaphylaxis for which drug allergy is a potential cause.

e) The estimated incidence of drug allergy in primary care shows that the incidence in women is twice as high as that in men. The reason for this is unclear.

Adverse drug reactions

f) Analysis of observational data has estimated that 6.5% of all hospital admissions in England occur because of adverse drug reactions. The Hospital Episode Statistics database for England,

from 1996–2000 reports a lower figure of 0.083%. It is unclear what proportion is because of drug allergy.

Anaphylaxis

g) Available estimates suggest that approximately 1 in 1333 people in England have experienced anaphylaxis at some point in their lives. This figure represents all cases and all causes of anaphylaxis. The proportion of cases of anaphylaxis because of drug allergy or other causes (such as allergic reaction to food or an insect bite) was not estimated.

Mortality and morbidity

h) The BSACI guideline on drug allergy reported a UK study which estimated that 0.32% of serious adverse drug reactions were fatal. The guidance does not estimate what proportion of these hospital admissions, prolonged stays, or deaths were attributable to drug allergy.

Risk factors

i) The BSACI guideline reports that the most important risk factor for drug allergy is a history of previous reaction to the same or related compound.

3.2 Current practice

a) There is variation in referral patterns and in the management of drug allergies. There is also variation in geographical access to specialist allergy centres, as most of the centres are located in cities. The variation may relate to a lack of knowledge of available services or a lack of local provision of a drug allergy centre. Therefore, only a proportion of people are likely to be treated in specialist allergy centres whereas others are never referred and remain in primary care. Some people have their drug allergy managed within other disciplines. For example, cancer centres may manage drug allergies related to their own treatment regimes.

b) The drugs commonly investigated/referred include: penicillins, other beta-lactam antibiotics, non-beta-lactam antibiotics, drugs given during general anaesthesia (for example neuromuscular blocking agents), local anaesthetics, aspirin and non-steroidal anti-inflammatory drugs (NSAIDs), angiotensin-converting enzyme inhibitors, radio-contrast media and plasma expanders.

c) The investigation of a drug allergy includes:

- assessing previous history of drug reactions and allergies
- taking a blood tryptase test at the time of the allergic reaction and when the patient has recovered
- performing a skin prick test, an intradermal test, a patch test and specific IgE testing (only available for a limited number of drugs)
- conducting a drug provocation test (controlled administration of a drug to diagnose drug hypersensitivity reactions).

d) Tests undertaken during an acute reaction to confirm or exclude diagnosis may include:

- Serum tryptase, urea and electrolytes, liver function test, full blood count, differentiated blood count, Coombs' test, antinuclear antibody, antineutrophil cytoplasmic, antibody erythrocyte sedimentation rate, blood coagulation tests and C-reactive protein.
- skin biopsy
- urine microscopy
- electrocardiogram
- chest X-ray.

e) Managing an adverse drug reaction with a possible immunological cause (including drug allergy) involves identifying alternative drugs, drug avoidance, advice and drug desensitisation.

f) People are often labelled as having drug allergy which can lead to lifelong avoidance of certain drugs, particularly antibiotics.

However, studies that performed skin prick test, intradermal test or oral challenge on people who have had a plausible history of drug allergy showed that most were able to tolerate the drug.

g) People who have experienced an adverse event during anaesthesia are often anxious about the possibility of needing surgery in the future and, unless the cause is investigated and diagnosed, they may actively avoid referral for future surgical treatment, with a consequent risk to their health.

This NICE guideline is needed to address the known and unknown variations in the diagnosis and management of drug allergies.

4 The guideline

The guideline development process is described in detail on the NICE website (see section 6, 'Further information').

This scope defines what the guideline will (and will not) examine, and what the guideline developers will consider. The scope is based on the referral from the Department of Health.

The areas that will be addressed by the guideline are described in the following sections.

4.1 Population

4.1.1 Groups that will be covered

a) Adults (19 years and older), young people and children with suspected and confirmed drug allergy (0 – 18 years old).

b) No patient subgroups have been identified as needing specific consideration.

4.1.2 Groups that will not be covered

a) None.

4.2 Healthcare setting

a) All settings where care is commissioned or provided by the NHS.

4.3 Clinical management

4.3.1 Key clinical issues that will be covered

a) Information and support needs of patients, carers and parents when appropriate, in all settings

b) Signs and symptoms of a drug allergy to identify possible drug allergy.

c) Documenting drug allergy, which may include the documentation and communication of suspected and confirmed drug allergies across all NHS primary and secondary care, dental services and by all healthcare professionals including drug allergy specialists

d) Use of diagnostic tests including, serum tryptase and serum specific immunoglobulin E (IgE).

e) Management by non-drug allergy specialists including avoidance, safe alternatives and referral.

f) Referral to a drug allergy specialist. Particular consideration will be given to the referral of people with suspected drug allergies to the following: local anaesthetics,, beta lactams, NSAIDs in people with asthma and allergic reactions during general anaesthesia.

4.3.2 Clinical issues that will not be covered

a) Other allergies (for example food allergies).

b) Treatment of the acute phase including anaphylaxis.

c) Investigation of allergies to individual drugs and populations (unless specified in included section).

d) Treatment of non-allergic adverse drug reactions.

4.4 Main outcomes

a) Mortality.

b) Medication errors

c) Length of hospital stay.

d) Acute admission and/or readmission into secondary care.

e) Number of contacts with healthcare professionals (for example with GP).

f) Inappropriate avoidance of drugs.

g) Health-related quality of life.

4.5 Economic aspects

Developers will take into account both clinical and cost effectiveness when making recommendations involving a choice between alternative interventions or strategies. A review of the economic evidence will be conducted and analyses will be carried out as appropriate. The preferred unit of effectiveness is the quality-adjusted life year (QALY), and the costs considered will usually be only from an NHS and personal social services (PSS) perspective. Further detail on the methods can be found in 'The guidelines manual' (see ‘Further information’).

4.6 Status

4.6.1 Scope

This is the consultation draft of the scope. The consultation dates are 3–31 October 2012.

4.6.2 Timing

The development of the guideline recommendations will begin in December 2012.

5 Related NICE guidance

- Anaphylaxis. NICE clinical guideline 134 (2011).
- Medicines adherence. NICE clinical guideline 76 (2009).
- Patient experience in adult NHS services. NICE clinical guideline 138 (2012).

6 Further information

Information on the guideline development process is provided in the following documents, available from the NICE website:

- 'How NICE clinical guidelines are developed: an overview for stakeholders the public and the NHS'
- 'The guidelines manual'.

Information on the progress of the guideline will also be available from the NICE website.