

Suggested topics for Education Programme on NRL awareness in a healthcare setting

NRL Allergy - Background Information

There has been an increase in glove usage due to:

- Increase in blood-borne diseases e.g. HIV, Hepatitis B etc.
- Increased need for protection in healthcare staff – Universal precautions
- Increased allergenicity in populations
- In 1980's there was a huge increase in glove production resulting in sensitisation in certain individuals – however increased awareness has helped to mitigate this

Prevalence

- Type IV most prevalent
- Type I may have plateaued
- In the USA - hospital employees 17% (some reports)
- In the UK – lower, estimated at ± 1%
- Spina Bifida and multiple surgery patients >18%
- Atopics - general allergenicity increasing
- Cross-reactive allergenicity

The Laws Relating to Latex Allergy

- Health and Safety Law
- Health and Safety at Work
- Personal Protective Equipment Regulations
- Reporting of Illness, Disease and Dangerous Occurrence Regulations
- Control Of Substances Hazardous to Health

Cross-reactive Allergens

Avocados, Apples, Bananas, Celery, Cherries, Chestnuts, Ficus, Figs, Grapes, Kiwi fruit, Mangoes, Melons, Passion Fruit, Peaches, Pears, Pistachios, Ragweed, Strawberries, Tomatoes

Reactions

- Irritation
- Type IV hypersensitivity - delayed
- Type I hypersensitivity - immediate

Irritation

- Non-allergic
- Caused by air occlusion, friction
- Reduce or remove by changing to low protein, low chemical, powder-free gloves
- Seek Occupational Health guidance (staff)
- Not life-threatening

Type IV reaction

- Delayed hypersensitivity, allergic contact dermatitis or a chemical allergy
- Caused by preservatives, antioxidants, colourants, accelerators in manufacture
- 6 - 48 hrs reaction post-exposure
- Skin dry, blistered
- T-cell mediated, localised response
- Can spread wider than locally with repeated exposure
- Change to glove manufactured with different accelerator/low residual levels
- Not life-threatening
- Report to Occupational Health (staff)

Type I Reaction

- Allergy to NRL proteins
- Systemic, B-cell mediated by circulating IgE
- Currently irreversible
- Seek positive diagnosis
- Work in a latex safe environment
- Notify relevant others; Occupational Health (staff), GP, Dentist
- Wear allergy identifier wristband / bracelet
- Carry prescribed Adrenaline auto-injectors
- Wear synthetic gloves
- Avoid latex products
- Avoid cross-reactive allergens
- Life-threatening

Type I - Signs and Symptoms

- Urticaria
- Itchy eyes
- Swelling of lips and tongue
- Breathlessness, asthma
- Abdominal Pain
- Hypotension
- Anaphylaxis, death

What Should Be Done?

- Glove audit
- Powder-free glove policy to reduce the risk of aerosolisation of absorbed NRL proteins
- Review need for glove use/practice
- Purchase gloves with low extractable protein and residual accelerator levels

Responsibilities of Staff

- Risk assessment
- Education
- Dissemination of information
- Recognise patients and staff at risk
- Creating safe environments for allergic individuals
- Recording critical incidents and reporting to NPSA
- Protecting confidentiality

NRL -Free Equipment

In each ward, dept. and theatre, NRL-free alternative products should be found through and stocked in a specific NRL-free kit. All staff should be informed of location. All crash trolleys should be NRL-free.

- Remove rubber bungs from multi-dose ampoules before drawing up drugs
- Do not use rubber ports on giving sets (NRL-free available)
- Clean with a detergent solution and cover all NRL with cotton or polythene if it cannot be removed, to minimize the risk of contact

Obtain Accurate History

- In an ideal world, GP or surgeons will have informed others. In reality, the anaesthetist is often first to ask the right questions
- On pre-admission, admission or pre-anaesthetic questionnaire ask relevant questions re history, i.e. allergy to any cross-reactive allergens and determine if Type I or Type IV to provide effective care
- Document information and use allergy stickers for positive individuals

Communication

- Inform ward staff (who should have elicited information on admission)
- Inform surgeons (who should have elicited information on pre-clerking)
- Inform peri-operative team
- Document and use latex allergy sticker on history sheet
- Inform admissions for information to be flagged on IT system, if possible

Critical Incidents/untoward Reactions

- Unexplained critical incidents in the past may have been an NRL-allergic response
- Record and report any unexpected reaction. Document according to Trust Policy
- Highlight in notes
- Follow-up by further investigation and if possible get positive diagnosis

Protection of Staff

- Provide education to colleagues in order that they can protect themselves, they can be patients also
- Only wear gloves when necessary - remember hand- washing?
- Always wash hands following glove use
- Do NOT wash gloves and continue to use (hydration, increased porosity)
- DO NOT wear powdered gloves, neither surgeon's nor examination.
- Aide memoire (in departments, Junior Doctor training etc)
- If staff get reactions refer to Occupational Health
- If diagnosed positive, must be able to work in latex free environment under Disability Discrimination Act
- Report to (RIDDOR) Reporting of Injuries, Disease and Dangerous Occurrence Regulations, if dermatitis occurs