Management of the Latex Sensitive Patient in the Operating Room

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Who is at risk?

In recent years, latex allergy has been recognized as a significant problem for both specific patient and provider populations. The incidence of latex allergy through out the general population has been estimated between 1% and 6% while certain paediatric populations may experience an incidence as high as 73% (e.g. people with spina bifida and related pathologies). (CRNA 2004).

The recent appearance and recognition of latex allergy as a serious medical concern has resulted from the incorporation of increased barrier precautions in preventing the transmission of infectious blood borne pathogens. Improved methods in diagnosing latex allergy also accounts for the recent rise in the number of reported cases.

Immediate hypersensitivity reactions to latex vary from contact urticaria to systemic anaphylaxis and laryngeal oedema that require lifesaving intervention. Allergic contact dermatitis can also occur and is a delayed hypersensitivity that mimics a poison ivy type skin reaction.

Individuals who have experienced a significant degree of repeated exposure to latex products are more likely to develop a latex allergy. These situations may include treatment that involves:

- Occupational exposure to latex
- Repeat surgical procedures
- Surgical procedures involving mucosal membranes
- Repeated placement of ventriculo-peritoneal shunts (i.e. cerebral palsy)
- Repeated or chronic intravenous and urinary catheterisations

Latex allergic patient in the Operating Room

The care of a latex allergic patient begins before the patient even reaches the operating room (OR) and once the patient has been identified as latex allergic steps are taken to ensure a 'latex safe environment'. It is almost impossible to provide a 'latex free environment' and patients must be made aware of this. The patient is supplied with a latex free kit that should accompany the patient everywhere that they go. Signs are posted outside the patient's room and an allergy alert bracelet is placed on the patients arm.

Ideally, the OR should be informed that the patient is latex allergic before they reach the department so that appropriate steps can be taken. In the Operating Room at Shaikh Khalifa Medical Centre (SKMC) we also have a latex free kit specifically for the OR that contains items that we might need for the patients care during their visit. This kit also contains any items that might be needed during their stay in the Post Anaesthetic Care Unit (PACU).

AORN (2002) recommends that the following steps be followed for all latex allergic patients requiring surgery:

- Schedule the case as the first case of the day if possible
- Notify the OR of potential latex allergy as early as possible
- Ensure that other health care providers (anaesthesia, PACU etc.) are aware of the patients allergy status
- Ensure the use of latex free products. Notify the surgeon when no alternative product is available
- Remove boxes of latex gloves from the room and replace with latex-free gloves, both sterile and non-sterile
- Remove all latex items from the OR except where no alternative exists
- Eliminate or control the use of latex products
- All mattresses, arm-boards and transportation vehicles should be completely covered with sheets or towels
- Double-check all supplies and equipment for latex
- Use latex-free IV tubing
- Use medication in ampoules or latex-free vials where possible
- Use glass or latex-free plastic syringes. If they are not available, draw up medication immediately before use in order to limit exposure time to the latex stopper
- Use latex-free blood pressure cuffs or if not available, wrap the patient's arm to prevent contact with the patient's skin

- Mark the OR doors with 'Latex Allergy" signs
- Provide latex-sensitive patients with a Latex Allergy" identification band
- The patient should proceed directly to the OR procedure room and not be held in the holding area.
- Prepare for a possible allergic response

Once in the OR traffic flow in the room should be restricted both before and during the procedure. Verify that additional items requested are latex-free before delivering them to the sterile field. Monitor the patient for anaphylactic reactions to latex during the procedure; be aware that a reaction could happen up to 40 minutes later. Ensure that the PACU staff are aware of the patient's latex allergy before the patient's transfer.

Signs and Symptoms of allergic reactions to latex

Awake patient	Anaesthetised patient
Itchy eyes	Tachycardia
Generalised pruritus	Hypotension
Shortness of breath	Wheezing
Feeling of faintness	Bronchospasm
Feeling of impending doom	Cardiorespiratory arrest
	Flushing
Unexplained restlessness	Facial oedema
And crying	Laryngeal oedema
Agitation	Urticaria
Nausea	
Vomiting	
Abdominal cramping	
Diarrhoea	
Wheezing	

Once again, it should be emphasized that it is impossible to make an operating room completely latex free (ORNAC 2004). However, we have a responsibility to our patients to make it as latex safe as possible. A policy and procedure should be in place at your facility for general management, and particularly for such specialized areas as the operating room, to guide staff. If your institute does not have one then approach your manager, or volunteer to be a member of a multidisciplinary committee to begin the process.

References

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Clinical Guidelines help meet JCI Accreditation Standards

Clinical Guidelines, Clinical Pathways, Best-Practice recommendations, Care Maps, Practice Guidelines, whatever the title all provide healthcare professionals, such as medicine, nursing and allied health with a proven basis and systematic approach for an appropriate treatment of a condition, disease or need. These are all guidelines that incorporate evidence along with expert opinions and represent recommendations based on thorough clinical research and sound professional agreement. Although they may have a variety of names, come from a variety of sources and have different intentions, they are indeed guidelines that can be used by health care professionals in practice. They are not intended to be a "set of laws," to be applied and followed without thought in all cases. Instead, they are part of an organisation's quality system, planned to support best practice patient care.

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has embraced the use of clinical guidelines, regardless of their title. In 1998, JCAHO recognised the importance of guidelines for improvement purposes and requirements were added to the leadership and performance improvement standards. In July 2001, the use of knowledge-based information for improving patient safety was added as an accreditation standard. The Joint Commission International (JCI) as a subsidiary of JCAHO supports their use in the international arena. The JCI Care of Patient (COP) standards do not command implementation of clinical guidelines in every situation, however recommendations from clinical guidelines should be considered when health professionals are planning patient care or clinical care processes. The standards state, "used to guide patient care," meaning that the organisation should use information

sources including clinical practice guidelines, literature resources, clinical pathways etc… in order to guide the planning and implementation of care. This information is to be used during a project for clinical care process improvement. Clinical care process improvement involves three main steps: (1) Describe or define the best; (2) Implement the best; and (3) Measure the impact. During the first step, information gathered from various sources is used to define the ideal or "best" practice. Before the medical profession accelerated systematic development of clinical practice guidelines in the 1990's, practitioners at the local level were the ones who defined appropriate patient care practices. The definition of best practice was derived from the organisation's traditional way of doing things and the subjective opinions of practitioners. According to Joint Commission standards, these local opinions should now be supplemented by scientific and literature evidence of what works best. The accreditation standards do not require that health professionals automatically adopt all guidelines. However, there should be evidence that practitioners reviewed and considered relevant guidelines and literature sources in order to standardise clinical care processes.

Clinical practice guidelines should also be considered when developing measures of clinical performance and outcomes. These measures should be based in part on the evidence-based recommendations found in clinical practice guidelines and should form part of the JCI quality management and improvement (QMI) system. For example, the American Society for Gastrointestinal Endoscopy developed guidelines that address the management of anticoagulation and antiplatelet therapy for patients undergoing endoscopic procedures. The guidelines recommend that warfarin therapy for patients with high-risk conditions be discontinued three to five days before a scheduled endoscopy procedure. High-risk conditions may include atrial fibrillation associated with valvular heart disease, including the presence of a mechanical valve, mechanical valves in the mitral position, and mechanical valves in patients who have suffered a prior thromboembolic event. If the surgery department is evaluating the quality of care provided to patients undergoing endoscopic procedures, one of the measures might be, "Percent of patients on warfarin therapy for a high-risk condition who discontinue therapy at least three days prior to the endoscopy procedure." This would be considered a clinical guideline based measurement and should be referenced as such on any internal policy, procedure or measure tool.

Clinical guidelines can also be valuable sources of comparative data if the guidelines are clear and there is good scientific evidence to support the recommendations. For example, there is very good evidence to suggest that prophylactic antibiotics be administered in the two hours before surgery to reduce the risk of wound infection. Anything less than 100 percent compliance with this guideline should prompt further investigation.

There is no need to "reinvent the wheel," when defining the best clinical processes for achieving desired patient outcomes. When undertaking a clinical care process improvement or when evaluating performance, JCI expects health professionals to consider the recommendations found in other resources. These evidence based clinical practice recommendations may come from medical societies or organisations, nursing and allied healthcare associations and policy-making bodies, and/or local organisations. Information helps to broaden the perspective of health professionals, who have traditionally relied on personal experiences to define best practices.

As facilities struggle to make changes in their clinical care processes, examine how they can meet best practices; it is important that all health professionals are aware of the most up to date clinical best practice guidelines and scrutinise how they can incorporate them into their clinical assessments, plans, performance and measurements.

Editors Note: Abu Dhabi Nurse unfortunately omitted the names of translators in previous articles "Care of new dialysis graft or fistula" article in the Summer 2003 issue was translated by Raed Katayen, Ward Clerk - B1, SKMC and "Get Published" in the Winter 2003/4 issue was translated by Ahmad Hammiejou, Translator – CEO office, SKMC. Abu Dhabi Nurse would like to thank them for their contribution and apologise for omitting an acknowledgement on the aforementioned articles.