One + all | we care

Royal Cornwall Hospitals NHS Trust

Serum Tryptase in the Investigation of Anaphylaxis Clinical Guideline

V4.0

February 2019

Summary

This guideline gives the details for investigating suspected anaphylaxis during the perioperative period.

1. Aim/Purpose of this Guideline

1.1. Anaphylaxis is a severe systemic allergic reaction resulting in respiratory and/or cardiovascular compromise often associated with urticaria and/or angioedema. These symptoms result from the release of inflammatory mediators from mast cells and can be triggered by allergen interaction with specific IgE on the mast cell surface or can be non-IgE mediated (pseudoallergic or anaphylactoid reactions).

1.2. In anaphylaxis, mast cell degranulation leads to markedly increased blood tryptase concentrations which can be useful for the investigation of suspected cases. Tryptase concentration in the blood may not increase significantly until 30 minutes or more after the onset of symptoms and peak 1-2 hours after onset.

2. The Guidance

2.1. Diagnosis / Investigation

Emergency treatment should not be delayed and should be based on a clinical diagnosis of anaphylaxis. Where diagnosis is difficult serum *tryptase taken at the time of the reaction may be helpful in* subsequent investigation.

2.2. Sample Timing

2.2.1. The timing of samples taken for serum tryptase is critical (due to short half-life).

2.2.2. The following must be recorded in the notes and on the request form:

- The time of the onset of the anaphylactic reaction (when symptoms were first noticed).
- The timing of samples.

2.3. Normal Sample Requirement

This is sufficient for most cases (particularly in A&E)

- One sample with 3 hours of onset of symptoms.

2.4. Ideal Sample Requirement

Recommended for complex reactions during general anaesthesia

- Initial sample as soon as feasible after resuscitation has started.
- Second sample at 1-2 hours after the start of symptoms
- Third sample either at 24 hours or in convalescence (for example in a follow-up allergy clinic). This provides baseline tryptase levels

2.5. Sample Requirements

- Serum or clotted blood
- Consult laboratory if you have any queries.

2.6. Later Investigations to Identify the Causative Agent

2.6.1. The anaesthetist who gave the anaesthetic or the supervising consultant anaesthetist is responsible for ensuring that the reaction is investigated. The patient should be referred to a specialist allergy or immunology centre (See www.aagbi.org for details). Our local centre in the South West is Derriford Hospital, Plymouth (Contact Dr Paul Sice or Dr Sarah Ford, Dept of Anaesthesia). The patient, surgeon and general practitioner should be informed. Reactions should be notified to the AAGBI National Anaesthetic Anaphylaxis Database.

2.6.2. Attending consultant should also ensure Anaphylaxis Lead (Dr William Fish) and ATP governance informed for local records maintenance. The Incident should be reported on the DATIX system.

3. Monitoring compliance and effectiveness

Element to be monitored	Adherence to published AAGBI and RCHT guidelines
Lead	Lead anaesthesia consultant for each case.
Tool	Audit and review of suspected anaphylaxis cases and their management will take place in monthly anaesthesia governance meetings.
Frequency	Will be determined by the incidence of anaphylaxis cases.
Reporting arrangements	The committee reviewing the cases will be the anaesthesia directorate. Cases will be discussed at audit meetings and the details will be recorded in the minutes.
Acting on recommendations and Lead(s)	See above.
Change in practice and lessons to be shared	Required changes to practice will be identified and actioned within a month. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders.

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the 'Equality, Diversity & Human Rights Policy' or the Equality and Diversity website.

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Document Title	Serum Tryptase in the Investigation of Anaphylaxis Clinical Guideline V4.0					
Date Issued/Approved:	May 2018					
Date Valid From:	February 2019					
Date Valid To:	February 2022					
Directorate / Department responsible (author/owner):	Dr David Elliott Consultant Anaesthetist					
Contact details:	01872 258195					
Brief summary of contents	Guidance for the investigation of suspected anaphylaxis during anaesthesia					
Suggested Keywords:	Serum Tryptase anaphylaxis allergic reaction					
Target Audience	RCHT	CFT	KCCG			
	✓					
Executive Director responsible for Policy:	Medical Director					
Date revised:	May 2018					
This document replaces (exact title of previous version):	Clinical Guidelines for Serum Tryptase in the Investigation of Anaphylaxis V3.1					
Approval route (names of committees)/consultation:	Anaesthetic and Theatres business group Governance Lead Anaesthetics					
Divisional Manager confirming approval processes	Roberta Fuller					
Name and Post Title of additional signatories	Not Applicable					
Name and Signature of Divisional/Directorate Governance Lead confirming approval by specialty and divisional management meetings	{Original Copy Signed}					
	Name: Suzanne Atkinson					
Signature of Executive Director giving approval	{Original Copy Signed}					
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet & Intranet	✓	Intranet Only			

Document Library Folder/Sub Folder	Clinical / Anaesthetics
Links to key external standards	The Association of Anaesthetists of Great Britain and Ireland
Related Documents:	Reference and Associated documents
Training Need Identified?	No

Version Control Table

Date	Version No	Summary of Changes	Changes Made by *(Name and Job Title)*
01 Jan 11	V1.0	Initial Issue	Dr David Elliot Consultant Anaesthetist
01 Apr 13	V2.0	Governance information moved to an appendix. EIA updated. Governance information amended to align with format of Document manager Upload Form.	Dr David Elliot Consultant Anaesthetist
01 Apr 15	V3.0	Guidelines reviewed only alteration reformatted to new standard.	Dr David Elliot Consultant Anaesthetist
01 Apr 15	V3.1	Sentence added 2.6.7. regarding reporting arrangements.	Gary Matthews Consultant Anaesthetist
01 Apr 18	V4.0	Updated reporting details, IEIA updated, Governance Information updated	Dr David Elliot Consultant Anaesthetist

All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.

This document is only valid on the day of printing

Controlled Document

This document has been created following the Royal Cornwall Hospitals NHS Trust Policy on Document Production. It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Initial Equality Impact Assessment Form

This assessment will need to be completed in stages to allow for adequate consultation with the relevant groups.

Name of the strategy / policy /proposal / service function to be assessed Serum Tryptase in the Investigation of Anaphylaxis Clinical Guideline V3.2					
Directorate and service area: Anaesthetics			**Is this a new or existing *Policy?*** Existing		
Name of individual completing assessment: Dr David Elliott			**Telephone:** 01872 250000		
1. *Policy* Aim* *Who is the strategy / policy / proposal / service function aimed at?*	To inform all anaesthesia staff on the appropriate investigations for suspected anaphylaxis during anaesthesia				
2. *Policy* Objectives*	Ensure the correct timing of blood samples and follow up care in cases of suspected anaphylaxis				
3. *Policy* – intended Outcomes*	Patients will be adequately investigated in cases of suspected anaphylaxis. Inappropriate investigations will be avoided.				
4. *How will you measure the outcome?	Monitoring through incident reporting and case discussion at governance meetings.				
5. Who is intended to benefit from the *policy*?	Patients				
6a Who did you consult with b). Please identify the groups who have been consulted about this procedure.	Workforce	Patients	Local groups	External organisations	Other
	Department of Anaesthesia			AAGBI	
	Consultant Body, Department on Anaesthesia, Royal Cornwall Hospital Association of Anaesthetists Great Britain and Northern Ireland, UK				
What was the outcome of the consultation?	Guideline agreed				

7. The Impact

Please complete the following table. **If you are unsure/don't know if there is a negative impact you need to repeat the consultation step**.

Are there concerns that the policy **could** have differential impact on:				
Equality Strands:	Yes	No	Unsure	Rationale for Assessment / Existing Evidence
Age		**X**		

Sex (male, female, trans-gender / gender reassignment)		**X**		
Race / Ethnic communities /groups		**X**		
Disability - Learning disability, physical impairment, sensory impairment, mental health conditions and some long term health conditions.		**X**		
Religion / other beliefs		**X**		
Marriage and Civil partnership		**X**		
Pregnancy and maternity		**X**		
Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian		**X**		

You will need to continue to a full Equality Impact Assessment if the following have been highlighted:

- You have ticked "Yes" in any column above and
- No consultation or evidence of there being consultation- this excludes any *policies* which have been identified as not requiring consultation**. or**
- Major this relates to service redesign or development

8. Please indicate if a full equality analysis is recommended.	**Yes**		**No**	**x**

9. If you are **not** recommending a Full Impact assessment please explain why.

Not applicable

Signature of policy developer / lead manager / director D Elliott	Date of completion and submission May 2018

Names and signatures of members carrying out the Screening Assessment	1. D. Elliott 2. Human Rights, Equality & Inclusion Lead	

Keep one copy and send a copy to the Human Rights, Equality and Inclusion Lead
c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Knowledge Spa, Truro, Cornwall, TR1 3HD

This EIA will not be uploaded to the Trust website without the signature of the Human Rights, Equality & Inclusion Lead.

A summary of the results will be published on the Trust's web site.

Signed ___ D Elliott

Date _____May 2018