Identification and treatment of transfusion reactions

A collaborative regional approach



Frances Sear PBM Practitioner East of England



Why did we need a regional guideline?

- Many medical and nursing staff move around hospitals within the region. Different practices in each hospital – potential delay and confusion
- A need for prompt recognition and treatment of transfusion reactions
- Standardised, familiar practice within the region



Aim of the guideline

- Not to rewrite national guidelines, but distil the information to maintain consistency across the region
- Provide an easily recognised and accessible tool for clinical staff
- The Regional Transfusion Team set a remit for an instantly identifiable regional algorithm.

What type of Guideline did we want?

- Based on the British Committee for standards in Haematology (BCSH) guidelines on the Investigation and management of Acute transfusion reactions 2012
- Must contain the relevant immediate clinical information
- Multifunctional tool hospitals could adapt to their individual practices.
- Concise easy reference algorithm





Formulating the Guideline





- Working group formed within the Transfusion Practitioner network to summarise the BCSH guidance
- Found many hospitals were using similar adapted versions of BCSH guidelines – decision to standardise and 'personalise' for the region.
- Algorithm produced(2 sided A4 document)
- Accompanying guideline document written, but not implemented at present.



Acute transfusion reactions (ATR)



East of England Regional Tranfusion Committee

Telephone numbers: Transfusion laboratory

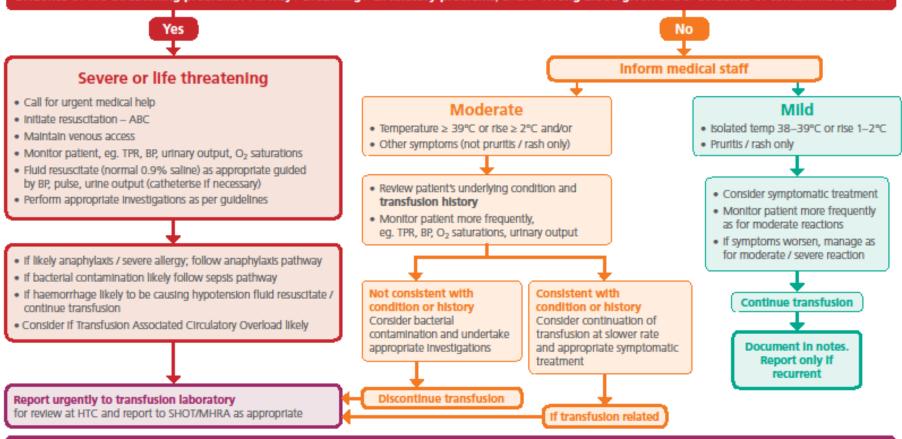
Haem, consultant

Is my patient having an acute transfusion reaction? Features may include:

fever, chills, rigors, tachycardia, hyper-/hypo-tension, collapse, flushing, urticaria, pain (bone, muscle, chest, abdominal), respiratory distress, nausea, general malaise

STOP THE TRANSFUSION — Assess (rapid clinical assessment), Check (patient ID / blood compatibility label), Inspect (look for turbidity, clots, discoloration)

Evidence of life threatening problems? Airway / Breathing / Circulatory problems, and/or wrong blood given and/or evidence of contaminated unit?



If transfusion is discontinued, DO NOT discard unit but return with administration set to transfusion lab

Safe transfusion practice - Be careful, be vigilant

All patients who have a blood component transfusion are at risk of an ATR

- · Patients receiving a transfusion must be in a clinical area monitored by trained staff competent to manage transfusion and ATR
- Check 'Right patient, right blood'. Confirm patient identity with patient, check patient ID band check component compatibility label

Inspect: Examine component bag for abnormal appearance (clumps, particles or discolouration). Check IV cannula site for infection
 Monitor: Measure patient's vital signs before transfusion, during transfusion and after transfusion

Inform: Ask patient to report any new symptoms or signs during transfusion and within 24 hours of transfusion

Signs and symptoms of ATR

- · Fever, chills, rigors
- Hypotension
- Pain

- HypoxiaSigns of analphylaxis
- Nausea
 - · Acute bleeding from mouth, rectum, bladder, wounds
 - · Severe anxiety or sense of impending doom
- Mouth or throat tingling or swelling (angioedema)
- Breathlessness or noisy breathing (stridor or wheeze)
- · Skin rashes or itch

Management

Stop transfusion immediately • ABC • Oxygen • Get medical help urgently

Myalgia

Suspect

Anaphylaxis

ABO incompatibility or sepsis (infection)

TACO or TRALI

If symptoms of

- Wheeze
- Hypotension
- Swelling
- Collapse
- Pain
- Fever
- Anxiety
- RigorsTachycardia
- Pain
 Rreathlessness
- I hypotonsion
- Hypotension
- Acute breathlessness
- Hypoxia

Treat

Anaphylaxis pathway

Give intramuscular adrenaline

Consider

chlorpheniramine • hydrocortisone • salbutamol

IV saline

Sepsis pathway (if sepsis)

IV broad spectrum antibiotics (if sepsis)

Furosemide (if TACO)

Investigate

- FBC, U&E, LFT, coagulation screen
- First urine sample (haemoglobin)
- Repeat blood group screen and save
- IgA level (EDTA)
- Serial mast cell tryptase at time 0, 3h, 24h (plain tube)
- · Blood cultures (if sepsis suspected)
- Consider CXR if breathlessness present

Report to laboratory all severe reactions • return blood component to laboratory • complete report / incident form

How is the guideline used?

Multifunctional - Up to individual hospitals how to utilise

- Laminated posters
- Electronic version on intranet
- Incorporation in Trust policies
- Hand-outs
- Part of Blood Transfusion chart / care pathway
- Available at Blood fridge
- Training presentations
- In resource packs
- Available to access through transfusionguidelines.org.uk



Outcome

- All Hospitals in the region use the guideline as part of their practice
- Staff moving around the region now have familiar, standardised documentation and guidance to use
- Quick reference clinical decision making tool
- Highlighted identification and treatment of transfusion reactions in the region
- Promotes improved patient safety



Acknowledgments

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Dr James Bamber

Consultant Anaesthetist Chair East of England Regional Transfusion Committee

Jane O'Brien

East of England Regional Transfusion Committee Administrator

East of England Transfusion Practitioner's Network



Sharing practice

- The Regional Transfusion committee are happy for the algorithm to be used by other Hospitals and groups upon acknowledgement of the committee.
- www.transfusionguidelines.org.uk
- → Regional Transfusion committees
- → East of England
- → Policies
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