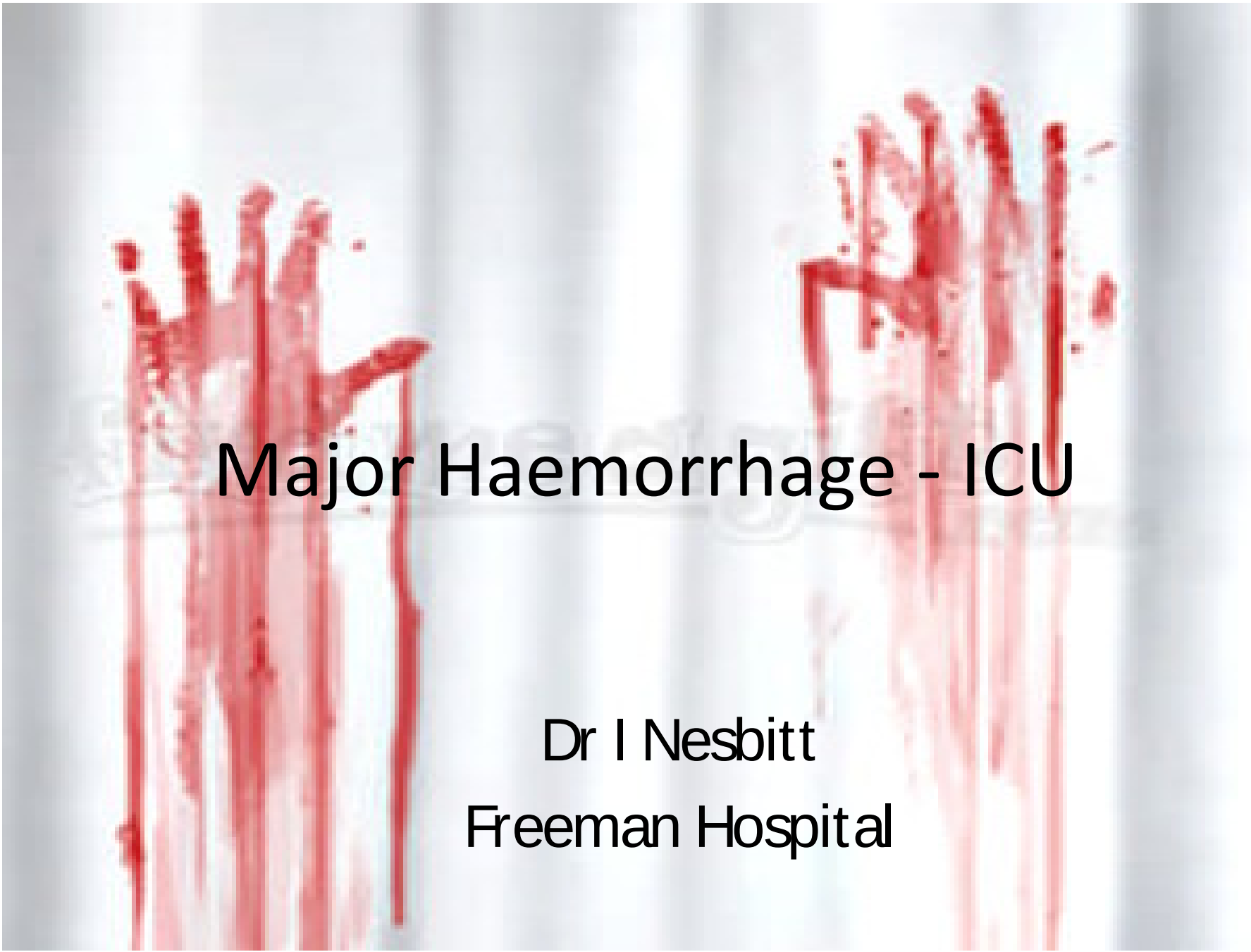




Major Haemorrhage - ICU

Dr I Nesbitt
Freeman Hospital

Introduction

- Definition
- Causes
- Identification
- Management
- Questions

What is Major Haemorrhage?

- Or, What is a massive transfusion?

Massive Transfusion

- Civilian practice: 100% BV 24hrs
 - Military practice:
 - Life threatening bleeding =
 - » 50% BV 3hrs
 - » 100% 24hrs
 - » 150ml/min
- (BV c.5000ml)

Pop Quiz

- Some serious Bleeding situations?

Common situations

- Post op
 - hypo-prothrombinaemia
- Medical
 - GI bleed, Massive haemoptysis
- Smaller bleeds in bad places
 - Intracranial
 - Tracheostomy
 - Post cardiac surgery

Pop Quiz

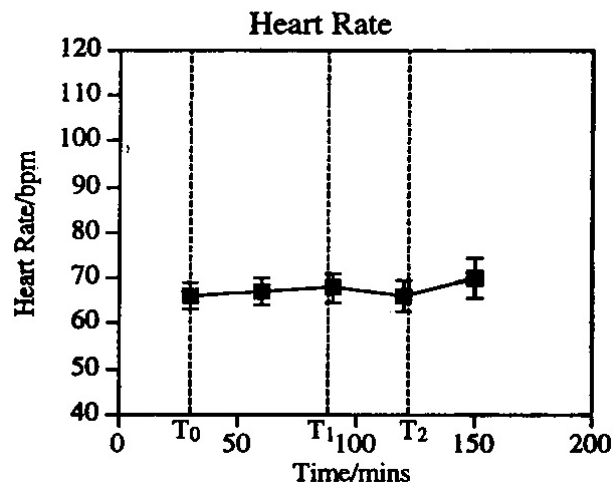
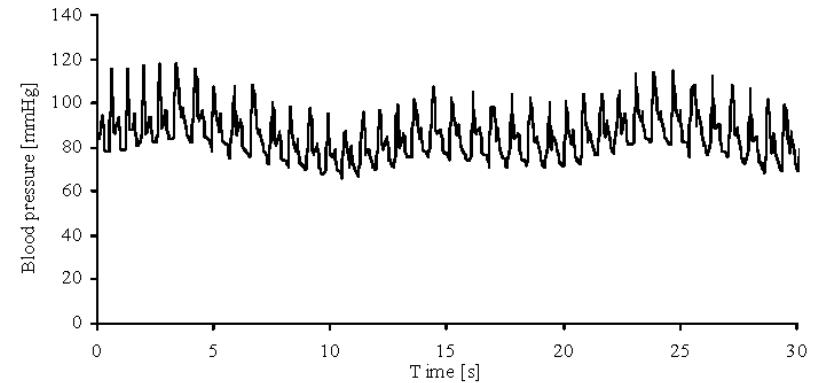
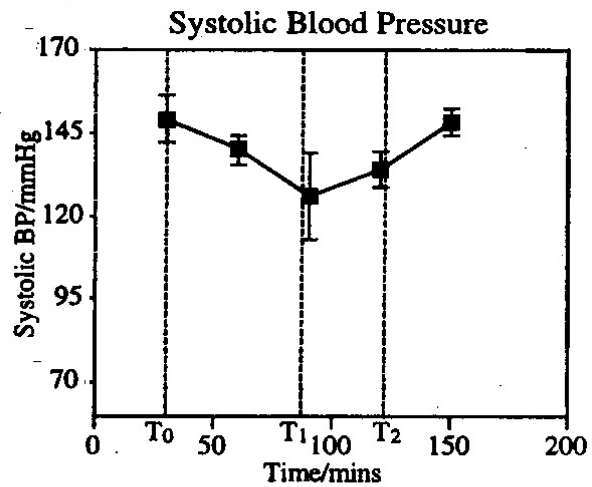
- How do you identify a serious bleeding problem?

Identification

- Legs off/head off etc
- Fluid requirements
- Transient responder
- Hb/Hct

Early Identification of Bleeding:

Monitoring intravascular volume



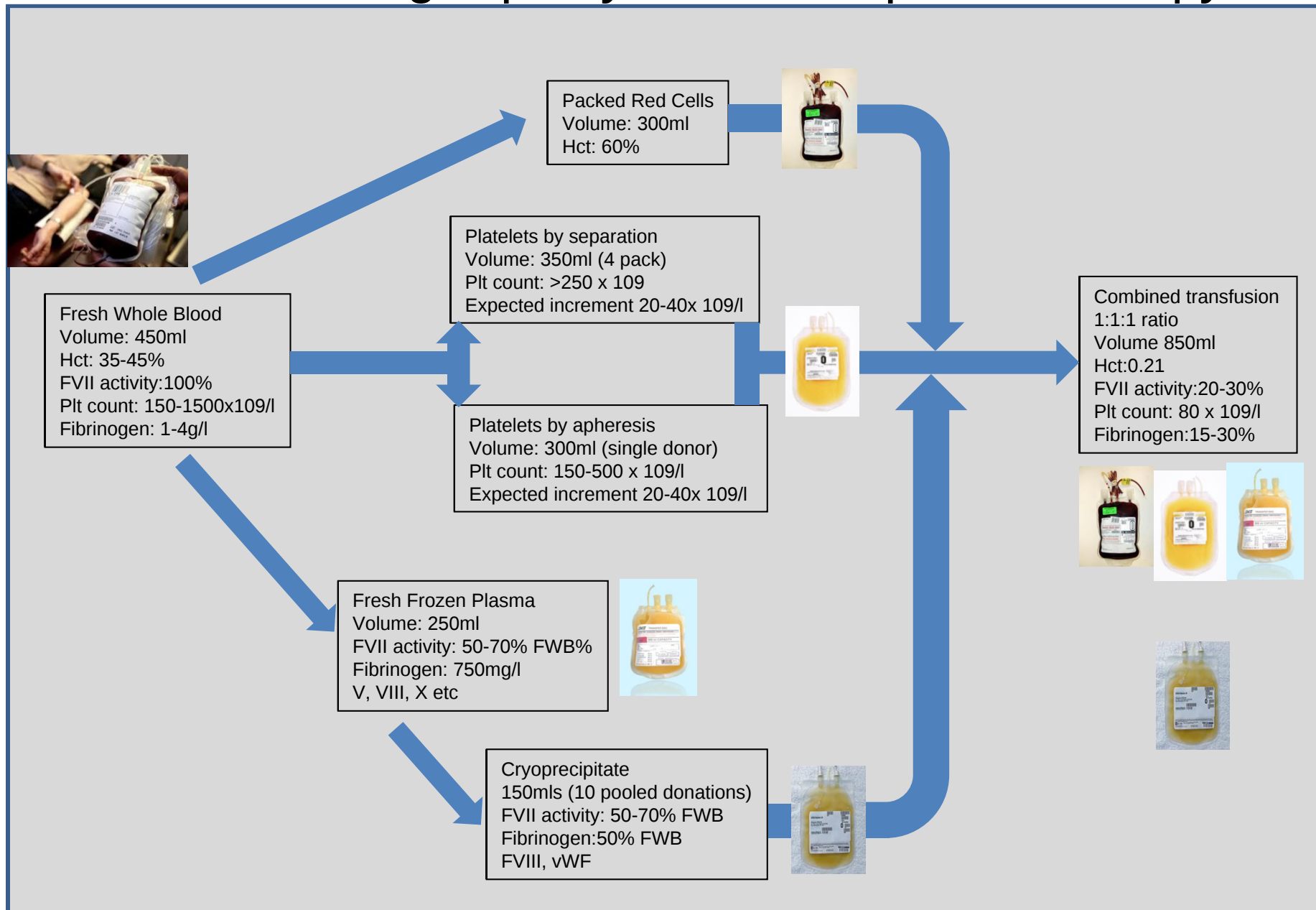
Clotting dysfunction in Haemorrhage

- Traditionally
 - Acidosis
 - Hypothermia
 - Dilution with iv fluids
- More complex concept

Coagulopathy of Trauma

- 25% arrive in ED with coagulopathy
 - Incidence increases with severity of trauma
 - Multifactorial
 - Fibrinogen ↓
 - Acidosis related platelet dysfunction
 - Dilutional
 - Consumption of factors

Dilutional coagulopathy due to component therapy



Blood products in Major Haemorrhage

- Historically- FWB
- Then component therapy
- Different situations- different practices
 - » Hypotensive resuscitation
 - » Early surgery- DCR/DCS
 - » Blood:FFP:plts 1:1:1
 - » Consider FVIIa
 - » TEG guided
 - » Early cryo

Pop Quiz

- Management of Major Haemorrhage?

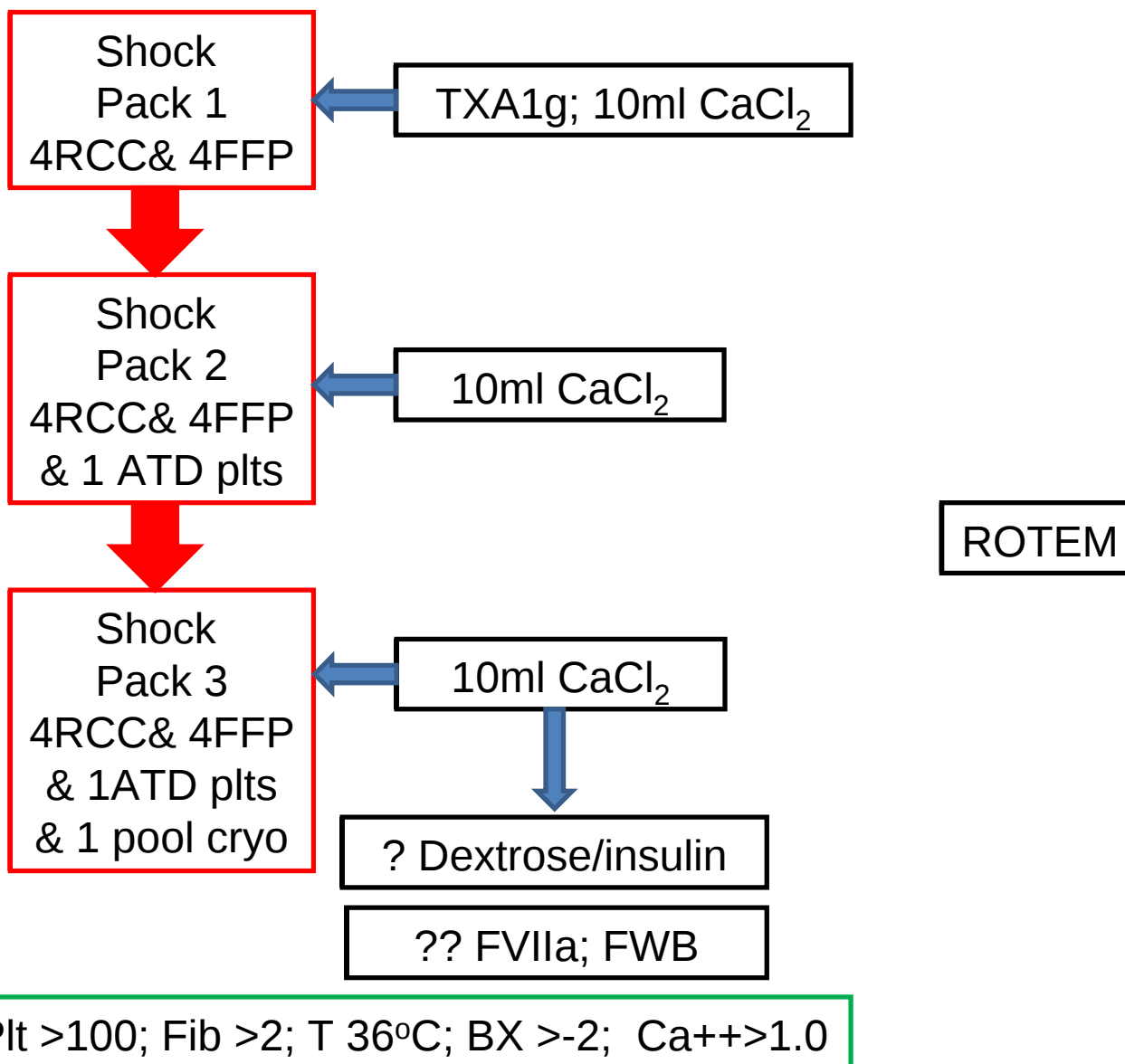
Immediate Management 1

- C-Abc
- Hypotensive Resuscitation
- Turn off the tap

Practical Management 2

- Any surgically/radiologically amenable cause?
- Early aggressive intervention
 - CABc
- Logistics and organisation

Massive Transfusion Protocol



Monitoring

- Vital Signs, lactate, BX
- FBC
 - Hb, plts
- Clotting
 - PT, APTT, Fibrinogen
- Dynamic studies (TEG)

Summary

- Recognise & Identify
- Get control, C-ABc
- Turn off the tap
- Replace and recover

Questions?

