BLOOD AND BLOOD COMPONENTS
TRANSFUSION PROTOCOLS IN OBSTETRICS

Transfusion Triggers for Packed Red Blood cells (PRBC)

1. When Hb concentration is >9 gm% RBC transfusion is not required.
2. If Hb concentration is 7 - 9 gm% RBC transfusion is not required in well-compensated patients, / and in non-urgent conditions where IV Iron therapy is available.
3. In Hb concentrations of 6 -7gm%, the decision to transfuse a single PRBC unit followed by reassessment, should be based on the clinical features of anaemia / decompensation, gestational age and associated risk factors for haemorrhage.
4. If Hb concentration ≤ 6gm%, RBC transfusion may be associated with reduced mortality and is necessary.
5. In Hb concentration ≤ 6gm%,decision to withhold transfusion should be individualized in postpartum patients.

Transfusion Triggers for Platelets (RDP/SDP)

1. Platelet transfusion is suggested when the platelet count is ≤ 50,000/dl and posted for LSCS.
2. Vaginal delivery can be tolerated up to platelet counts ≤ 20,000/dl.
3. Platelet transfusion is suggested in Dengue/ infective pathology when platelet counts are ≤10,000/dl
4. Platelet transfusion is suggested when platelet >10,000/dl but with clinical features of spontaneous bleed.
5. Platelet transfusion is suggested in **MOH (Massive Obstetric Haemorrhage)** as a part of **MTP(Massive Transfusion Protocol)** to maintain the platelet count >75,000/dl in ongoing blood loss.
6. In ITP/ autoimmune cases avoid platelet transfusions. Methylprednisolone /IVIG should be tried as first line of treatment.
7. Platelet transfusion is not beneficial in cases where there is no active bleeding, and active surgical intervention is not needed.

Transfusion Triggers for Fresh Frozen Plasma (FFPs)

1. Fresh Frozen Plasma (FFPs) are indicated when the INR is >1.5 in patients scheduled for LSCS or vaginal delivery
2. FFPs are indicated in MOH where the blood loss is >150ml/minute or Blood loss exceeding MABL and ongoing loss present
3. In patients on Warfarin / therapeutic LMWH INR is >1.5 and posted for emergency operative or vaginal delivery
4. In cases of isolated prolongation of APTT >1.5 x control.
5. In patients with abnormal coagulation tests (INR >1.5) who are not bleeding, and active surgical intervention is not required, the routine use FFP is not indicated.
6. FFPs are not indicated for routine plasma expansion or as protein supplementation.

Transfusion Triggers for Cryoprecipitate

1. Cryoprecipitates are indicated in MOH as a part of MTP.
2. Early Cryoprecipitates are indicated in MOH if fibrinogen levels are less than 200mg%
3. Isolated Cryoprecipitates are indicated patients with familial hypofibrinogenemia
4. In patients with abnormal coagulation tests (INR >1.5) who are not bleeding, and active surgical intervention is not required, the routine use of Cryoprecipitates is not indicated.

TRANSFUSION TRIGGERS, TARGETS AND TREATMENTS

Parameters to be monitored	Transfusion Triggers	Targets of Transfusion	Action to be taken
Consciousness (GCS)	Agitation/ drowsy	Verbal Response +	Supplemental oxygen 2L crystalloids / PRBC
Temperature	Temperature <35°C	Temperature37 -38°C	Warmer Warm fluids
Haemoglobin	Hb < 7gm% with ongoing blood loss	Hb > 8gm%	PRBC UPTO 3
Platelet count	Platelet count <50 000	Platelet count ≥ 75000	4 RDPs (<70Kg) 6RDPs(>70Kg) or I SDP
Acid –base status	pH <7.2, base excess > –6, lactate >4 mmol/L	pH 7.35-7.45 Lactate clearance to be present	Fluid supplementation, haemodynamic stability through transfusions ± inotropes, Supplemental /100% oxygen with intubation.
PT/INR	PT >1.5 × normal INR >1.5	PT <1.5 × normal	MTP 1 : 4 PRBC 4FFP. MTP 2: 6PRBC, 6FFPs,10 cryos; MTP 3: 6PRBC, 6FFPs,10 cryos; 6RDP or 1 I SDP
APTT	APTT >1.5 × normal		
Fibrinogen level	Fibrinogen level <200mg/%	Fibrinogen level ≥200mg/%	
Ionised calcium	Ionised calcium <1.1 mmol/L	>1.1 mmol/L	Calcium gluconate 30gm over 30min To be repeated if necessary
Urine out put	≤ 30ml/hour	≥ 30ml/hour	Maintain renal perfusion with volume replacement, Ionotropic support, and Lasix