Policy & SOP`s for Patient Safety in Blood Transfusion

Select Correct Blood Component for your Patient

1. **Red Blood Cell.**
   A) Hemoglobin less than or equal to 7g/dl
   B) Hematocrit less than or equal to 20%
   C) Active blood loss greater than 750 ml (15% of Estimated blood Volume)
   D) Pre-operative Hb less than or equal to 8g/dl

2. **Platelet**

   a) Platelet < 20,000/ul
   b) Platelet < 50,000/ul and patient actively bleeding or impending surgery or invasive procedure.
   c) Diffuse micro – vascular bleeding with any platelet count / no count.
   d) Platelet function defect with bleeding
   e) Platelet < 10,000/ul in immune thrombocytopenia
   f) Platelet < 100,000 with CNS bleeding

3. **Plasma**

   1. Active Bleeding / Invasive procedure/ impending surgery with multiple coagulation factor deficiency (DIC Liver Disease) documented by:
      a) PT/APTT greater than 1.5 times of normal.
      b) INR > 1.5
   2. Emergency reversal of warfarin effect (For non – Emergency consider vitamin K)
   3. Documented deficiency of specific coagulation factor
   4. Diffuse micro-vascular bleeding and no labs available

Note: These are general guidelines. The final decision resets with the treating clinician.

Guidelines for the Recognition and Management of Acute Transfusion Reactions

Category: 1 Mild Reaction

S/Symptoms Uticaria, Rash, Pruritis

Management:

1. Slow the Transfusion
2. Administer Antihistamine
3. If no clinical improvement or worsen within 30 minutes treat as Category 2.

Category: 2 Moderate Reactions

S/Symptoms	Flushing	Anxiety	Urticaria
	Palpitation	Rigors	Dyspnea
	Fever	Headache	Tachycardia

Management

1. Stop the transfusion, replace the infusion set and keep IV line open with N/ Saline.
2. Notify the responsible doctor and blood bank
3. Send the infusion set, blood unit and fresh blood sample in EDTA tube and plain tube from the vein opposite to infusion site to blood bank for investigations.
4. Administer
   - Antihistamine
   - Antipyretic
   - Corticosteroids
   - Bronchodilators (in case of bronchospasm)
5. Collect Urine for next 24 hours for
   - Evidence of Hemolysis
   - Input/out Put Chart
   - Labs for Hemolysis
6. If no clinical improvement within 15 min or S/Symptoms worsens treat as **category 3.**

CATEGORY 3: LIFE THREATENING REACTIONS

S/ Symptoms

Rigors
Fever
Hypotension (>20% fall in BP)
Tachycardia (>20% rise in HR)
Hemoglobinuria (red urine)
Unexplained bleeding (DIC)
Chest Pain.
Loin/ Back Pain
Dyspnea

Management.

1. Stop the transfusion. Replace the infusion set and keep IV line open with normal Saline.
2. Infuse normal saline (initially 20-30 ml/ kg) to maintain systolic BP. If hypertensive, give over 5 minutes and elevate patient`s legs.
3. Maintain airway and give high flow oxygen by mask.
4. Give ad reline (as 1:1000 solution) 0.01 mg/ kg body weight by slow intramuscular injection.
5. Give IV corticosteroids and bronchodilators if there are anayphylactoied features (e.g. bronchospasm, stridor).
6. Give diuretic: e.g. furosemide 1 mg/kg IV or equivalent.
7. Notify the doctor responsible for patient and blood bank immediately.
8. Send blood unit with infusion set, fresh urine sample and new blood samples (EDTA tube and 1 pain tube) from vein opposite to infusion site with appropriate request form to blood bank for investigations.
9. Check a fresh urine specimen visually for signs of hemoglobinuria.
10. Start a 24-hours urine collection and fluid balance chart and record all intake and output Maintain fluid balance.
11. Assess for bleeding from puncture sites or wounds. If there is clinical or laboratory evidence of DIC, give platelets (adult:5-6 units) and either cryoprecipitate (adult: 4-6 units) or fresh frozen plasma (adult:3 units)

Note.

1. If an acute transfusion reaction occurs, first check the blood pack labels and the patient`s identify. If there is any discrepancy, stop the transfusion immediately and consult the blood bank.

2. In an unconscious or anaesthetized patent, hypotension and uncontrolled bleeding may be the only signs of an incompatible transfusion.

Liaquat University Hospital Hyderabad / Jamshoro

Blood Transfusion Policy

01. Purpose:

To promote a culture of patient safety and donor safety by adhering to best practices

02. Objective:

A leadership will ensure that minimal SOP`s for patient safety and donor safety are followed and a culture of safe blood transfusion & blood transfusion adverse reaction risk estimated and medical errors are minimized.

03. Scope:

The Sop's applies to all indoor wards surgical Operation theaters COD casualty where ever blood transfusion performs including blood banks.

04. Responsibilities:

All medical and Para medical staff, administrative, clinical involved in blood transfusion.

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	Name & Designation	**Signature**	**Date**
Complied by:	Dr Aftab Haider Deeshak (RMO / IPO Officer)		1st July, 2022
Reviewed by:	Dr Nazir Hyder Shah (AMS Prev/- HMIS / IPC / Statistics)		1st July, 2022
Approved by:	Dr Abdul Hafeez Abro (Medical Superintendent)		1st July, 2022