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| TYPES OF COLLOID  | EXAMPLES  | INDICATIONS | CONSIDERATIONS |
| Natural | Whole blood  | 1. Anaemic
2. Hypercoagulable disorder
3. PCV < 20
4. Albumin < 25
5. Total protein < 35
 | Amount of blood to be used = 2 ml/kg (for 1 % increase in PCV) at 20 ml/kg/hr, initial dose 0.1 ml/kg/ 5 – 10 minsBlood has a short shelf life hence require anticoagulants Anticoagulants include 4% sodium citrate given at 50 ml per 400 ml of blood or Heparin at 2 units per ml of whole blood Use with cautions and monitor for anaphylactic reactions and scientific infection  |
| Plasma  | 1. Anaemic
2. Hypercoagulable disorder
3. Transfer of anti-immunoglobins use to treat failure of passive transfer in calves < 2 days old (can also use whole blood)
4. Acute management of burns
5. Emergency treatment of shock specially due to loss of plasma
6. Fluid resuscitation in intensive care
 | 5 ml/kg/hr for first 15 mins and then double rate if no anaphylaxis is observed Use with cautions and monitor for anaphylactic reactions and scientific infection  |
| Synthetic  | Hydroxyethyl starch (HES)) | 1. Used to retain fluid in intravascular compartment
2. Blood Loss
3. Shock
 | **Coagulation:** HES administration is associated with reduction in circulating factor VIII and von Willebrand factor levels, impairment of platelet function, prolongation of partial thromboplastin time and activated partial thromboplastin time and increases bleeding complications.**Accumulation:** High molecular weight (HMW) HES are associated with greater degree of accumulation in interstitial spaces and reticulo-endothelial system**Renal impairment**: HMW HES has been found to be associated with increased creatinine levels, oliguria, acute renal failure in  |
| Dextran | 1. Antithrombotic effects leads to destabilization of clot formation
2. Extracorporeal circulation
 | Dextran 40 has been associated with acute renal failure, anaphylaxis, and bleeding diathesis in small animalsMay cause severe anaphylactic reactions due to reactive antibodies Coagulation abnormalities: may lead to decreased platelet adhesiveness, decreased factor VIII, increase fibrinolysis and coating of endothelium is decreased.Interference with cross-match:  can interfere with the ability to cross-match blood. Dextran also increase erythrocyte sedimentation rate. Precipitation of acute renal failure: accumulation of the dextran molecules in the renal tubules causing tubular plugging.  |
| Hemoglobin glutamer-200 (Oxyglobin—Biopure)  | 1. Colloidal properties like hetastarch but with a bovine hemoglobin-based solution
2. Used to increase plasma and total hemoglobin concentrations in anaemic animals
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