ALBERTA PRECISION LABORATORIES
Leaders in Laboratory Medicine

Cryosupernatant Plasma

APPLICABILITY: This document applies to AHS, Covenant Health, and all other health care professionals involved in the transfusion of blood components and products in Alberta	***Other Names:*** *Cryopoor Plasma* ***Class:*** *Human blood component*

	INTRAVENOUS			OTHER		
ROUTES	**DIRECT IV**	**Intermittent Infusion**	**Continuous Infusion**	**SC**	**IM**	**OTHER**
Acceptable Routes*	No	Yes	No	No	No	N/A

*** Professionals performing these restricted activities have received authorization from their regulatory college and have the knowledge and skill to perform the skill competently.**

DESCRIPTION OF PRODUCT:

- Cryosupernatant Plasma (CSP) is prepared from slowly thawed Frozen Plasma that is centrifuged to separate the insoluble cryopreciptate from the plasma. The remaining Cryosupernatant plasma is then refrozen.
- The approximate volume of a unit is 273 mL
- CSP has reduced levels of Factor VIII and von Willebrand Factor (vWF), and does not contain measurable amounts of Factor VIII or fibrinogen.
- Donors are screened and blood donations are tested for:
  - ABO/Rh and clinically significant antibodies
  - Antibodies to human immunodeficiency virus (HIV-1 and HIV-2), hepatitis C virus (HCV), human T-cell lymphotropic virus type I and II (HTLV-I/II), hepatitis B core antigen (HBcore)
  - Hepatitis B Surface Antigen (HBsAg)
  - Presence of viral RNA (HIV-1 and HCV) and viral DNA (hepatitis B virus (HBV))
  - Syphilis

AVAILABILITY:

- Not all laboratories/transfusion services stock CSP.
- Product is stored frozen, and as a result requires preparation time prior to issuing.
- Patient blood type should be determined when possible to allow for ABO specific/compatible plasma transfusion

INDICATIONS FOR USE:

- Plasma exchange in patients with Thrombotic Thrombocytopenic Purpura (TTP) or Hemolytic Uremic Syndrome (HUS).
- Elective reversal of oral anticoagulant therapy pre-invasive procedure , where Prothrombin Complex Concentrates are contraindicated

CONTRAINDICATIONS:

- Do not use for conditions that require von Willebrand Factor supplementation.
- Do not use when coagulopathy can be corrected with specific therapy, such as vitamin K, or specific factor replacement.
- Do not use for volume replacement.
- Do not use to assist wound healing.

DOSE:

- The volume transfused will depend on the clinical situation and patient size.
- Standard dosing is 10-15 mL/kg

ADMINISTRATION:

Ensure patient consent has been obtained prior to requesting blood components and products from lab transfusion service where possible.

Pre-Infusion:

- Administer any ordered pre-medications.
- Perform the appropriate pre-transfusion checks per nursing protocol.

Access(s):

- Peripheral, central, umbilical and PICC lines are acceptable sites for CSP transfusion.

Administration Set:

- Administer through a standard blood transfusion set (170 – 260 micron filter) and change every 8 hours or per manufacturer's recommendations

Compatible Solutions:

- 0.9% Sodium Chloride.

Administration:

- Complete transfusion within 4 hours of removal from a cold storage device approved by the Transfusion Service/laboratory.

Infusion Rate:

- Rate/duration should be specified by the MRHP after patient assessment.
- Adult infusions should be started at a rate of 2 mL/min for the first 15 minutes

POTENTIAL HAZARDS WITH PARENTERAL ADMINISTRATION:

Adverse Events

- Potential adverse events related to a blood component transfusion range in severity, from minor with no sequelae, to life-threatening.
- All adverse events occurring during a transfusion should be evaluated to determine whether or not the transfusion can be safely continued/restarted.
- All adverse events suspected to be related to a transfusion (whether during or after a transfusion) should be reported to your local lab/ TM service.

NURSING IMPLICATIONS:

Patient Monitoring:

<table>
<tr><th rowspan="2"></th><th rowspan="2">Pre Transfusion Vitals?</th><th colspan="3">Stay At Patient Bedside?</th><th colspan="2">Vital Signs During Transfusion</th><th rowspan="2">Post Transfusion Monitoring</th></tr>
<tr><th>First 5 Min</th><th>First 10 min</th><th>First 15 min</th><th>After 15 min</th><th>Remainder of transfusion</th></tr>
<tr><td>ADULTS
(in patients)</td><td>Yes</td><td>Yes</td><td colspan="2">NO, but must be immediately available*</td><td>Yes</td><td>q1h</td><td>Set of V/S then monitor prn</td></tr>
<tr><td>ADULTS
(out patients)</td><td>Yes</td><td>Yes</td><td colspan="2">NO, but must be immediately available*</td><td>Yes</td><td>q1h</td><td>Set of V/S. Monitor for minimum of 15 min post**</td></tr>
<tr><td>PEDIATRICS & NEONATES</td><td>Yes</td><td colspan="3">YES</td><td>Yes</td><td>1st hour→q15 min

2nd and 3rd hours→ q30 min then q1h until complete</td><td>For 30-60 minutes following</td></tr>
</table>

* Defined as performing non-dedicated tasks with the patient in view.

**If patient has had a previous adverse reaction to component transfusion, or this is the first transfusion patient has had for component, monitor for 30-60 minutes.

Note: Vital signs/patient monitoring may be conducted more frequently as determined by clinical condition of patient.

Patients receiving blood component transfusions must be observed closely for signs of any unexpected or untoward reactions. These reactions may occur during or after the infusion. For follow up instructions to a transfusion reaction, see the following link: http://www.albertahealthservices.ca/4240.asp

Documentation:

- The transfusion documentation should be double signed (where required) to indicate infusion.
  - Start and stop time of infusion and assessment of patient tolerability should also be documented in appropriate flowsheets or clinical record (electronic or paper) as required.
  - Document vital signs as required in the appropriate flowsheet or clinical record (electronic or paper).
  - Provide patient notification of transfusion documentation where required (electronic or paper).

STORAGE & STABILITY of PRODUCT:

- CSP is stored at -18°C for up to 12 months from the date of collection.
- Once thawed, CSP can be stored at 1-6°C for a maximum of 5 days

COMMENTS:

Date Effective: 11 June 2020
Version 1.11
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Document Number: TM40-01.01.002
For questions or comments about this document, please contact Transfusion.SafetyTeam@albertaprecisionlabs.ca

REFERENCES:

Plasma Components Circular of Information, Canadian Blood Services Aug 2019
Canadian Blood Services Clinical Guide to Transfusion
CSA and CSTM Standards
AABB Technical Manual
Bloody Easy 4