

ORAL PRESENTATION

Use of an Autologous Fibrin Sealant (CryoSeal FS) Reduces Transfusion Requirements in Selected Surgical Procedures

Presentation Start:

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Reviewing Code:

Components (RBC preparation and storage, plasma and derivatives, platelets and WBCs)

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Abstract Body:

Introduction: The Cryoseal FS system is a new automated method of preparing a fibrin sealant/glue from a single unit of autologous human or allogeneic plasma. A fibrin sealant is defined as a hemostatic, sealant and adhesive agent produced by combining cryoprecipitate, rich in fibrinogen, and thrombin at the wound site. . The advantage of this method is that in using human autologous rather than allogeneic plus bovine thrombin, the risk of transmitted viruses such as HBV B19, as well as the theoretical risk of transmitting vCJD, may be greatly reduced. We examined the efficacy of this product in reducing allogeneic blood transfusion in cardiac, neurosurgical, orthopaedic and general surgical patients.

Project: Autologous CryoSeal was prepared from 21 patients, and in 20, the red cells were kept for use as autologous transfusion as required. The fibrin sealant was administered in all patients. 6.7ml +/-1.4mL CryoSeal FS was obtained from 215ml +/- 38ml of plasma.

48% of patients received autologous blood . Only 2 patients managed with CryoSeal required allogeneic transfusion (both revision lumbar laminectomies). Of 11 primary CABG patients there were no allogeneic red cell transfusions. 39% of the primary CABG patients received autologous blood.(mean 1.3u/pt); in contrast, 71% of 19 autologous CABG patients not treated with CryoSeal FS received autologous red cells. (mean 2.3u/pt).

Conclusion: This was the first trial of CryoSeal FS in Canada. A truly multidisciplinary process, it was received with positive feedback by surgeons and nurses, and the preliminary data suggests that it has the potential to reduce allogeneic transfusion. Further patient enrollement is planned.

Cardiac Patient Results (CABG only)

Autologous Patients	CryoSeal <u>Yes</u>	Cyroseal <u>No</u>
N	11	19
% transfused with autologous red cells	39%	71%
Mean # autologous units transfused/pt	1.3	1.7
% transfused with allogeneic red cells	0%	21%
Mean # allogeneic units transfused/pt	2.5