



Rh PROGRAM of NOVA SCOTIA

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To: Prenatal Health Caregivers in Nova Scotia

Date: January, 2010

Re: Kleihauer formula adjustment for the administration of additional Rho(D) immune globulin (Rh negative recipient exposure to Rh positive blood)

The current formula used by the Rh Program to calculate additional amounts of Rho(D) immune globulin (WinRho®SDF *Liquid*) is based on **10 µg** of WinRho®SDF *Liquid* per ml of Rh positive whole blood (20 micrograms per ml of Rh positive red blood cells (RBC's)).

Cangene Corporation, producers of WinRho®SDF *Liquid* advise administering **12 µg** of WinRho®SDF *Liquid* per ml of Rh positive whole blood (24 micrograms per ml of Rh positive RBC's) when the product is given intramuscularly, as noted below:

Transfusion Indication and Recommended Dose ¹

| Route of administration | If exposed to Rho(D) Positive Whole Blood | If exposed to Rho(D) Positive Red Blood Cells |
|-------------------------|---|---|
| Intravenous | 45 IU (9 µg) /mL Blood | 90 IU (18 µg) /mL Cells |
| Intramuscular | 60 IU (12 µg) /mL Blood | 120 IU (24 µg) /mL Cells |

In keeping with the recommendation of Cangene Corporation, the Rh Program is advising that our formula for calculating additional WinRho®SDF *Liquid* be altered. Since this product is mainly administered intramuscularly, we will now use **12 µg** of WinRho®SDF *Liquid* per ml Rh positive whole blood (24 ug per ml Rh positive RBC's) The standard dose of 120 µg will continue to be adequate for a Kleihauer result of 0.2%, and 300 µg is adequate for a Kleihauer result of 0.5%. Below is an example of our new formula:

Example:

Kleihauer result: 0.3% (0.003) of maternal blood is fetal blood.

Maternal blood volume estimate = 5000 mL

$0.003 \times 5000 = 15\text{mL fetal blood}$

$15\text{ mL} \times 12\ \mu\text{g} = \mathbf{180\ \mu\text{g}}$ of WinRho®SDF *Liquid* required.

Plan: Administer either two vials of 120 µg **or** one vial of 300 µg to provide adequate coverage in this example.

Caregivers can be reassured that our incidence of new women developing anti-D antibodies (8.7/year) has dropped significantly in the past 10 years to 5.7/year. Please contact the Rh Program if you have any questions regarding this change.

Michiel C. Van den Hof, MD FRCS (C)
Director

¹ WinRho®SDF Product Monograph, pages 19-20. www.winrho.ca