Contraception 114 (2022) 1–5

Contents lists available at ScienceDirect

Contraception

journal homepage: www.elsevier.com/locate/contraception

Review Article

Society of Family Planning committee consensus on Rh testing in early pregnancy☆☆☆

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ARTICLE INFO

Article history:
Received 28 June 2022
Received in revised form 8 July 2022
Accepted 11 July 2022

Keywords:
Abortion
Early pregnancy loss
Fetomaternal hemorrhage
Rh immunization
Rh immunoglobulin
Rh sensitization

ABSTRACT

Historical evidence that fetal red blood cell (RBC) exposure during early spontaneous or induced abortion can cause maternal Rh sensitization is limited. A close reading of these studies indicates that forgoing Rh immunoglobulin administration before 12weeks gestation is highly unlikely to increase risk of Rh (D) antibody development, and recent studies indicate that fetal RBC exposure during aspiration abortion <12 weeks gestation is below the calculated threshold to cause maternal Rh sensitization, and the amount of fetomaternal hemorrhage during dilation and evacuation procedures up to 18weeks gestation is adequately treated with 100mcg of Rh immunoglobulin. We provide updated recommendations for Rh immunoglobulin administration based on this new evidence.

1. Background

Rh-negative patients who are exposed to the Rh(D) antigen may become sensitized and immunized to Rh-positive red blood cells (RBCs)[1]. Production of Rh(D) antibodies in subsequent pregnancies can cross the placenta and destroy the RBCs of any Rh-positive fetus, leading to hemolytic disease of the newborn. The process of sensitization is multifactorial, dependent on volume of fetal red blood cell exposure, ABO compatibility and other factors [1]. Even prior to the discovery of Rh immunoglobulin, only 9% to10% of pregnancies in Rh-negative patients led to sensitization.

Hemolytic disease of the newborn can generally be avoided, as giving Rh immunoglobulin at 28-weeks' gestation and again at delivery has decreased the rates of immunization from 10% to 0.2% [2]. While administration of Rh immunoglobulin later in pregnancy is recommended, the gestational age at which this becomes necessary is not known. Conclusive evidence of benefit of Rh immunoglobulin administration in early pregnancy after spontaneous or induced abortion has not been found, as rates have not decreased further with routine administration of Rh immunoglobulin earlier in pregnancy [2].

The lack of evidence for use of Rh immunoglobulin in early pregnancy, coupled with improved techniques for measuring fetal RBCs, and better data collection have led to new research in this topic. Increased use of medication abortion [3], decreased use of sharp curettage, increased self-managed abortion [4,5], and updated FDA labeling removing the in-person dispensing requirement for mifepristone [6] illustrate changes in clinical care that have occurred over the past 2 to 3 decades. Evolving research and clinical practices warrant reconsidering early pregnancy Rh immunoglobulin administration recommendations which may add an unnecessary barrier to abortion care. This committee consensus statement recommends providing Rh immunoglobulin only after 12 weeks gestation for spontaneous abortion or medication or aspiration abortion.

☆ Conflict of interest: Sarah Horvath is a Nexplanon Trainer for Organon. The other authors report no conflicts. The Society of Family Planning receives no direct support from pharmaceutical companies or other industries for the development of clinical guidance.

☆☆ Funding: No specific funding was provided for the development of this document.

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https://doi.org/10.1016/j.contraception.2022.07.002
0010-7824/