



e-Network Forum

CALIFORNIA BLOOD BANK SOCIETY

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Should one offer Rh immunoprophylaxis for a woman who delivers a baby determined to be Dvi positive?

A blood banker in Leeds, United Kingdom, reports that at his hospital the babies who are born to apparently D negative women are typed with two different anti-D typing reagents, one of which detects Dvi positivity. The reagent that reacts with Dvi cells is used in a gel card, while the other anti-D reagent (which does not react with Dvi cells) is used in a tube spin test. Upon detection of a possible Dvi baby the result is confirmed by a red cell reference laboratory (National Blood Service - Leeds) and the baby's group is confirmed as Dvi positive. That baby is treated as D negative for all neonatal transfusion therapy, but is considered as D positive in regards to the mother and possible maternal anti-D immunoprophylaxis. The Leeds blood banker wants to know if the baby is determined as Dvi positive, is it really necessary to give prophylactic anti-D to the baby's mother? In the not so distant past this would not have been an issue as the prophylaxis would have been given without worry, but now, according to the UK blood banker, all blood product risks are being reassessed in the UK, and any exposure to any blood product or derivative is under scrutiny. The UK blood banker hopes to receive feedback from the e-Network Forum.

The following responses have been received.

1. **A transfusion medicine physician at an academic center in Southern California** reports that at his institution, if confronted with the above neonatal Rh typing results, he **would recommend immunoprophylaxis** for the mother, assuming she is Rh negative and not yet alloimmunized to D. This physician refers readers to a recent publication by [John Judd](#) in *Transfusion*, Nov. 2001.

ADDENDA Aug. 17, 2002

2. **An expert immunohematologist** wrote that in the case under discussion, the Rh testing protocol employed in many US laboratories for determination of a patient's Rh may not suggest that the mother of a Dvi neonate is herself Dvi. The reason that the mother's Dvi status might not be appreciated (if she is Dvi) is that (according to the immunohematologist) none of the currently available FDA-licensed anti-D's marketed in the USA react in direct agglutination tests with Dvi RBCs. This is true for the IgM monoclonal components of Ortho, Gamma and Immucor tube reagents and for the monoclonal anti-D gel columns marketed by Ortho. However, the IgG component of all **tube** reagents will react with Dvi RBCs. These data will be presented by Judd and colleagues at the 2002 AABB Meeting in Orlando. The e-network readership may be interested in a paper by [Dr. WA Flegel](#) from Germany in *Clin Lab* 2002;48(1-2):53-9. Dr. Flegel advocates using anti-D's that do **not** detect Dvi, and considers Dvi pregnant women as potential candidates for RhIG therapy. Dvi individuals can make anti-D if exposed to normal Rh positive RBCs. Further, the responding expert's institution has not performed tests for 'weak D' on prenatal women since 1983; such testing is not required by AABB Standards. Of course, that institution does check for fetal-maternal hemorrhage in the immediate post-partum period. In summary, the responding expert thinks it would be standard-of-care in the US to do a test of the neonate for weak D (which could detect Dvi), and if positive, give the mother RhIG, if she is Rh negative or even if she is Dvi. The Dvi infant's RBCs will react with all FDA-licensed tube anti-D reagents by the indirect antiglobulin test. The next question is: Should the mother be evaluated for a large fetal-maternal hemorrhage (FMH), and if so how? If the mother is Dvi, an anti-D based method to detect FMH may be grossly positive; the responding immunohematologist's SOP dictates doing a Kleihauer-Betke test and basing RhIG dose on that result, but this may be 'overkill'.

ADDENDA Aug. 28, 2002

3. **A blood banker familiar with the work of Dr. Willy Flegel** provided the following link to the [full text article](#) (PDF) for the reference cited in [response #2](#) above. In addition, the responding blood banker provided a link to a German guideline of interest on [typing for antigen D](#), which is relevant to this discussion. This last link is part of a larger one from the same group, entitled "The Rhesus Site", and has been added to the CBBS Useful Links page, under Reference, 'Education/General

[Guidelines'](#)

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Ira A. Shulman, MD
CBBS e-Network Forum Editor & Moderator

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Posted: August 16, 2002

Addenda: Aug. 17 & 28, 2002