

Acute Health Division

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Distribution: Public Hospitals
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Subject: Guidelines for the use of Anti-D Immunoglobulin in
Obstetrics

Purpose: To advise you of of the NHMRC Guidelines on the use of
Anti-D

The Royal Australian College of Obstetricians and Gynecologists have rescinded their Guidelines for the use of Anti-D Immunoglobulin in Obstetrics. These Guidelines have been superseded by National Health and Medical Research Council (NHMRC) Guidelines for the use of Rh D immunoglobulin (Anti-D) in obstetrics, which were approved in 1995. An extract from the NHMRC Anti-D Guidelines is attached, which includes an important note of caution regarding the limited supply of Anti-D and antenatal prophylaxis.

The National Health Advisory Committee of the NHMRC is currently reviewing current use of Anti-D and working towards updating of the 1995 document, taking into consideration current formulations and supply of the product.

Please ensure that these Guidelines are distributed to the appropriate personnel in your hospital, particularly to the Casualty Department.

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Guidelines for the use of Rh D Immunoglobulin (Anti-D) in Obstetrics

At the June Council meeting the interim recommendations for the use of Anti-D Immunoglobulin, which were forwarded in a letter dated 21 March, 1995 to all Members and Fellows, were rescinded.

The current Guidelines for the use of Anti-D are those approved by the NHMRC, in November 1995 which have had only limited circulation. An extract is published below.

(A note of caution is appended to this extract).

Extract from NHMRC

Guidelines for the use of Rh D immunoglobulin (Anti-D) in obstetrics

1. General

For successful immunoprophylaxis Rh D immunoglobulin should be administered as soon as possible after a potentially immunising event, but always within 72 hours. If Rh D immunoglobulin has not been offered within 72 hours, a dose offered up to 9-10 days may provide protection. Blood should be taken from the mother prior to administration of the Rh D immunoglobulin to assess the magnitude of fetomaternal haemorrhage.

2. Postpartum

A dose of 125µg Rh D immunoglobulin should be offered to every Rh D negative woman with no preformed Anti-D following delivery of an Rh D positive baby.

The magnitude of fetomaternal haemorrhage should be assessed by a method capable of detecting a haemorrhage of 6ml of fetal red cells (1% of whole blood). These methods include a commercially available qualitative rosette test, quantitative acid elution test (Kleihauer) and flow cytometry. If the qualitative rosette test is positive, one of the quantitative methods should be used to determine the amount of fetomaternal haemorrhage and further doses administered sufficient to prevent maternal immunisation (20µg of Rh D immunoglobulin for every 1ml of fetal red blood cells above 6ml which would be covered by the initial dose).

3. First trimester

A dose of 50µg (250IU) Rh D immunoglobulin should be offered to every Rh D negative woman with no preformed Anti-D to ensure adequate protection against immunisation for the following indications up to and including: 12 weeks gestation; miscarriage; threatened miscarriage;

termination of pregnancy; ectopic pregnancy; and chorionic villus sampling.

A dose of 50µg of Rh D immunoglobulin is sufficient to prevent immunisation by a fetomaternal haemorrhage of 2.5ml of fetal red cells (5ml whole blood).

Should a woman present later in pregnancy with these indications a dose of 125µg Rh D immunoglobulin should be offered. Assessment of the magnitude of fetomaternal haemorrhage should be made and further doses administered as in (2).

Until a 50µg Rh D immunoglobulin vial becomes available in Australia, 125µg Rh D immunoglobulin should be used.

Studies should be conducted to establish the range of fetomaternal haemorrhage in these first trimester events.

The working party strongly recommends that women undergoing termination of pregnancy be offered blood group testing to determine their Rh D type to avoid unnecessary use of Rh D immunoglobulin.

4. Genetic studies

For chorionic villus sampling in the first trimester see guideline 3.

Beyond the first trimester a dose of 125µg Rh D immunoglobulin should be offered to every Rh D negative woman with no preformed Anti-D after procedures such as chorionic villus sampling, amniocentesis and cordocentesis are performed.

As studies for the efficacy of this dose for this indication are not available it is recommended that the magnitude of fetomaternal haemorrhage be assessed and further doses administered as for (2) especially where transplacental access or puncture of fetal blood vessels occurs.

5. Trauma

A dose of 125µg Rh D immunoglobulin should be offered to every Rh D negative woman with no preformed Anti-D for abdominal trauma considered sufficient to cause a degree of placental separation.

Assessment of the magnitude of fetomaternal haemorrhage should be made and further doses administered as for (2).

6. Antepartum haemorrhage

A dose of 125µg Rh D immunoglobulin should be offered to every Rh D negative woman with no preformed Anti-D in each occasion of revealed or concealed antepartum haemorrhage. Where the patient suffers unexplained uterine pain the possibility of concealed antepartum haemorrhage should be considered with a view to immunoprophylaxis.

Assessment of the magnitude of fetomaternal haemorrhage should be made and further doses administered as for (2).

7. External cephalic versions

A dose of 125µg Rh D immunoglobulin should be offered to every Rh D negative woman with no preformed Anti-D after external cephalic version has been performed or attempted.

Assessment of the magnitude of fetomaternal haemorrhage should be made and further doses administered as for (2).

8. Antenatal prophylaxis (please see 'A note of caution' below)

Antenatal prophylaxis with Rh D immunoglobulin should be discussed with the woman and offered if appropriate at 28 weeks and again at 34 weeks gestation at a dose of 125µg. Postpartum management with administration of Rh D immunoglobulin if the infant is Rh D positive should remain unchanged even if passive Anti-D is still detectable.

9. Other indications

When Rh D positive red cells or platelets are administered to an Rh D negative patient consideration should be given to administration of Rh D immunoglobulin to prevent immunisation and the formation of Anti-D.

Administration of Rh D immunoglobulin in such situations should be offered to all Rh D negative females of child bearing potential (from birth to menopause) with no preformed Anti-D.

The required dose should be calculated on the basis that 20µg of Rh D immunoglobulin will suppress immunisation by 1ml D positive red

cells. For larger volume red cell transfusion assessment of the adequacy of the dose should be undertaken every 48 hours and further Rh D immunoglobulin administered until all D

positive cells have been cleared from the circulation.

10. Non acceptance of Rh D immunoglobulin

A woman who chooses not to accept

the offer of Rh D immunoglobulin in a clinically appropriate situation should be offered follow up at six and 12 months to assess the possible development of Anti-D.

Extract from NHMRC

Guidelines for the use of Rh D immunoglobulin (anti-D) in obstetrics (1995)

A NOTE OF CAUTION to the

Guidelines for the use of Rh D Immunoglobulin (Anti-D) in obstetrics

In 1995 the NHMRC endorsed these Guidelines. These Guidelines would apply if there were an unlimited supply of Anti-D.

However, currently there are very limited supplies of Anti-D internationally. Domestic production of Anti-D is low and continuing importation of 'RHOGAM' from the U.S. at current levels can not be assured.

Recommendation 8 of the Guidelines states: 'Antenatal prophylaxis with RhD immunoglobulin should be discussed with the (RhD negative)

woman and offered if appropriate at 28 weeks and again at 34 weeks gestation at a dose of 125µg...'. It is recognised that this remains a controversial issue.

If fully implemented, antenatal prophylaxis is recommended would reduce supplies of Anti-D for treatment where patients present with indications which compel its use.

The NHMRC has established a Working Party to review the situation and prepare updated guidelines to recommend the most effective use of the limited supply until sufficient supplies can be assured. These

guidelines will be available for consultation at the end of 1997 and they will be reviewed in 12 months, or sooner, should the supply situation change.

Until the updated guidelines are available it is suggested the Recommendation 8 contained in this report not be regarded as usual practice.

*Richard Larkins, Chairman, NHMRC.
August 1997.*