

Evidence of Clinical and Cost effectiveness of Pregnancy routine anti-D prophylaxis for rhesus negative women

What is it like to be rhesus negative?

- **What symptoms and problems do pregnant women have as a result of the condition?**

Physically symptom free

However, if sensitisation occurs, the difficulties can be varied, although there would be no symptoms, the women would need extra support from informed health professionals, who can give accurate information on risks, monitoring, treatment and impact on future pregnancy's.

Anxiety related to welfare of baby and welfare of baby in future pregnancies. The risk of the baby dying or being severely ill and the prospect of invasive and risky interventions would affect the mothers enjoyment of her pregnancy and may affect her ability to become 'emotionally involved' with her baby. For some the risks associated with an amniocentesis to determine blood group may be too high.

Possibly unable to collect stem cells from the cord at birth.

Possibly have to undergo more than the usual blood tests and more frequent ultra sound scans.

Enduring injections, a stressful process for those that are needle phobic.

- **How does the condition affect day to day life?**

No affects daily, except for planning antenatal check ups, blood tests and injections

For sensitised women in second or further pregnancies, the extra monitoring, though necessary and reassuring, is quite burdensome and involves frequent hospital appointments. This meant frequent disruption to routine with other children, the need to organise childcare or prepare snacks and amusements for the child/ren, the boredom of waiting for an hour or more, the stress and expense of hospital parking and/or bus fare.

- **Are there activities that pregnant women are not able to do because of the condition?**

Home birth??

Once sensitised, low tech birth unit or home birth is unlikely, if baby's blood group is not known before birth.

Collect blood for stem cell storage?

- **Does the condition have an impact on family, friends and employers?**

Time off work for check ups, blood tests and injections.

If sensitised all the extra checks and monitoring would be very time consuming, especially in comparison to appointments for receiving anti D.

What are the outcomes that matter most to patients?

- **Which aspects of the condition do patients most want the technology to help with ?**

Ensuring a healthy baby

Avoiding rhesus disease/haemolytic disease of the newborn

Avoiding anaemia, jaundice and enlarged organs in the baby

Avoiding inter-utero blood transfusion or an early induced labour
Preventing baby being stillborn
Reassurance there is no? risk of sensitisation
Although, it may be true that not many women are aware of all the potential risks of becoming sensitised.

What difference does the technology make?

- **How does the technology compare with other available treatments?**

No other form of treatment available?

Without the anti-D some women may choose to have regular blood tests to ensure there are no antibodies being formed. This was offered to me in my 2nd pregnancy, although this would have very little benefit as blood tests could not possibly prevent sensitisation – in theory anti-D has to be given within a few days of sensitisation so the chances of a blood test being within that time frame are remote and more frequent ones in a first pregnancy would be unlikely to be cost effective.

- **What positive and negative impacts does the technology have on the condition?**

Positive impact – reassurance, in case of a silent bleed. Can safely have ECV, CVS and amniocentesis procedures

Negative impact – none known at present, but an antenatal anti D injection may complicate the monitoring of sensitisation at a later date, therefore detailed notes must be made available for future care givers.

- **Which symptom is the technology best or worst at treating?**

Avoiding potential sensitisation.

- **What difference does the technology make to patients' long term health and well being?**

Being more likely to have healthy babies. Avoids lifelong heart break of infant death and still birth because of rhesus disease

- **Does the technology have any side effects? If so which ones are patients prepared to put up with and which ones do they find unacceptable?**

Possible short term side effects for the mother may include headaches, pyrexia, skin reactions such as rash and itch, malaise, and pain, soreness or bruising at the injection site. The short term side effects to the baby are unknown and the long term effect on mother and baby are also unknown. A theoretical risk has been suggested which may affect reproduction of the baby girls who's mother had received anti-D antenatally.

There is the possible risk of women receiving anti-D becoming infected with viral, blood borne diseases such as hepatitis C, HIV and CJD, but this risk has been put at less than 1 in a million, so may be an acceptable risk for most women.

- **What would the impact be on the condition if the technology was not available?**

There would be a greater risk of sensitisation and the subsequent problems particularly in women that have a silent bleed in pregnancy and are unaware a potentially sensitising event had occurred.

- **Are there any groups of patients who seem to benefit more or less from the technology?**

Possibly those women that have a history of placental abruption, vaginal bleeding and miscarriage or those that would need CVS, amniocentesis or an ECV would

benefit more from the anti-D prophylaxis as they would be at a higher risk of sensitisation.

However, if there was a safe way of determining the blood type of the baby and the father, then this would eliminate the need for groups of women receiving anti-D unnecessarily.

Using the technology

- **How well or badly does the use of the technology fit into patients' lives?**

The injections are required at 28 and 34 weeks of pregnancy and can be performed by the midwife in clinic, so in theory, women would need to have 2 extra antenatal appointments, possibly lasting a little longer than usual to account for the waiting time after the injection, but could in practise be combined with a routine appointment, so should be accommodated relatively easily.

- **Is there anything about the technology that makes it hard or easy to use?**

The only restriction is that the injection cannot be given during a home visit due to the risk of an allergic response. But may be given by a midwife or nurse, so no need for a consultant / hospital appointment.

- **Are there any groups of patients that have difficulty using the technology?**

The anti-D can only be administered by injection, so any mother with a needle phobia may struggle.

People who have antibodies against immunoglobulin A (IgA).

People who have had atypical reactions following receipt of a blood transfusion or blood products.

- **Are there any costs to patients or their families in using the technology including time, transport costs and carer costs?**

Hospital car parks are generally quite expensive and it would be helpful for pregnant women to have car park passes. Two anti D injections are unlikely to be massively burdensome, but the extra appointments required once sensitised are far more hassle and expense.

Emma Wightman
15/01/08