Anti-D immunisation in pregnancy: cases reported in 2015

17

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Key SHOT messages

- All pregnant women who have produced immune anti-D detected for the first time in the current (index) pregnancy should be reported to SHOT. This includes cases where the woman subsequently produces immune anti-D in pregnancy as a result of an error of anti-D immunoglobulin (Ig) administration
- Accumulation of sufficient cases is needed to clarify the optimal prophylactic anti-D Ig regimen in pregnancy. There is no other way we can obtain this information. These data also serve as a reminder to laboratory and clinical staff of the significance to current and future pregnancies of correct management of potentially sensitising events
- All reporters should ensure they obtain as full a dataset as possible. Since immune anti-D may be detected at the start of pregnancy, the SHOT office will send reporters a reminder to complete the full questionnaire shortly after the expected date of delivery
- SHOT is exploring a potential collaboration with NHSBT Alloimmune Resource (AIR) study - a research project funded by NHSBT to determine genetic influences that predispose women to developing red cell alloantibodies during pregnancy. The findings may influence future management of women in pregnancy to prevent sensitisation to the D antigen

Synopsis of data collected in 2015

Women who have not had a previous pregnancy (NPP):

17 new cases reported in 2015 and cumulative to date 33 cases.

- The majority of women reported in 2015 (11/17) were found to be immunised at delivery. Five of these women received apparently 'ideal' care with timely routine antenatal anti-D Ig prophylaxis (RAADP) and no identifiable sensitising episodes. They were not overweight and the pregnancies did not go beyond term. Only one of the remaining 6 women had had a sensitising event (for which she did not receive appropriate prophylaxis), 3 women did not receive RAADP, 2 women who did receive RAADP had booking weights >80kg, and 2 who received single dose RAADP at 28 weeks delivered beyond term (one of whom also weighed >80kg).

  Cumulatively since data collection began in 2012, 10 of 33 NPP cases (30%) who became immunised received apparently 'ideal' care

- 3 cases were immunised at booking despite no previous pregnancies or transfusion, although one was a known intravenous drug user

Women who have had one or more previous pregnancies (PP):

34 new cases reported in 2015 and cumulative to date 84 cases

- In 15 cases, sensitisation was most likely to have occurred during the previous pregnancy as anti-D was detected at booking in the index pregnancy. Five of these 15 cases (33%) received apparently 'ideal' care in the previous pregnancy, although in 2 cases the previous pregnancy had continued beyond term

- In 19 cases sensitisation occurred later in pregnancy so that the relative contribution of previous pregnancies is less clear

Cumulatively since data collection began in 2012, 13 out of 41 PP cases (32%) found to be immunised at booking received apparently 'ideal care' in preceding pregnancy.

COMMENTARY

While errors/omissions in care continue to result in anti-D immunisation in pregnancy we again see a small number of cases where apparently 'ideal' care is given, no other risk factors are identified and yet sensitisation occurs, leading to the production of immune anti-D in current or subsequent pregnancies.

The cause of sensitisation in these cases is unknown and it will be very interesting to see whether genetic studies will identify women at particular risk of alloimmunisation to explain these findings, and whether such women once identified require a different approach to prophylaxis.

Full details are available in the 2015 Annual SHOT Report: Web Edition.