2019 Annual SHOT Report – Supplementary information

Chapter 8: Adverse Events Related to Anti-D Immunoglobulin (Ig)

Information technology (IT)-related Anti-D Ig cases n=13

There were 13 cases where IT errors played a part in incorrect anti-D Ig administration.

Anti-D Ig given unnecessarily n=9

Anti-D Ig was given to 5 D-positive mothers and on 4/5 occasions this was because the maternal electronic patient record and the laboratory information management system (LIMS) were not linked electronically and the result had to be transferred manually. In another case the analyser incorrectly assigned a D-negative group to a mother with weak D. This was a problem with the analyser that required upgrading and recalibrating.

Anti-D Ig was given where the baby at birth was D-negative or the fetus following cell-free fetal deoxyribonucleic acid (cffDNA) testing was predicted to be D-negative. The 2 cases below exemplify the importance of having a process in place to use the cffDNA result to guide issue of anti-D Ig from the LIMS using a set of flags or logic rules.

Case 8.2: Flags or logic rules not updated to reflect new processes

A woman had a potentially sensitising event after 20 weeks gestation and a Kleihauer was sent to the laboratory. On reporting the Kleihauer an automatic LIMS comment prompted the issue of anti-D Ig. Anti-D Ig was duly issued and administered, although the midwife did query whether this was necessary and was reassured by the laboratory that it was. However, a sample for cffDNA had been analysed and predicted the fetus was D-negative. It was the laboratory policy to check the cffDNA result before issuing anti-D Ig but this was not done. The LIMS had not been configured to link to this result when issuing anti-D Ig so the LIMS did not prevent issue of anti-D Ig in this situation.

Case 8.3: Ineffective recording of cffDNA result

Anti-D Ig was given to a D-negative woman carrying a D-negative fetus. A woman presented late in pregnancy with reduced fetal movements and it was noted that she had not been given routine antenatal anti-D Ig prophylaxis (RAADP) so after checking with the laboratory it was given late. She had a cffDNA sample sent but the result was not on the LIMS, however it was on Sp-ICE which was accessed the following day and the fetus was predicted to be D-negative. In fact, this had also been accessed by the community midwife which is why RAADP had not been given, but this was not recorded. There was no procedure in place for putting the cffDNA result onto the LIMS and therefore no way of ensuring that anti-D prophylaxis is only given to those who need it.

Delayed anti-D Ig administration n=3

On 1 occasion the D group had been deleted in error from the booking bloods by a biomedical scientist (BMS) in another department at the point of inputting a set of microbiology results. This had resulted in delay in identifying a D-negative woman eligible for anti-D Ig.

Another delay post delivery could have been prevented if the cord blood result had been transmitted directly to the maternity electronic patient record. On this occasion the wrong result was received verbally (although there was no record of the conversation) and the woman was discharged without anti-D Ig.

A 3rd case was given anti-D Ig late because there was a discrepancy between the mother's blood groups taken in the current pregnancy and one tested 2 years previously. Investigation showed that the historical blood group had been assigned to a different person but the LIMS records had been incorrectly inked.

Miscellaneous n=1

A final miscellaneous case resulted in a woman being given anti-D Ig which was assigned in the LIMS to a different patient. The labels had been mixed up at issue of anti-D Ig to an antenatal clinic.