Handling cFFDNA results

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Background

- Early implementer of RhD typing by referral to NHSBT for cFFDNA testing
- Went live 1st Feb 2016
- Sample referral is managed by the Laboratory
- Visibility of results acknowledged in the set up
- Multi-disciplinary approach
Oxfordshire Antenatal service

- 8000+ deliveries per annum
- 250+ midwives who rotate between primary and secondary care
- Most antenatal care in the community under primary care
Summary of our process

Â Laboratory IT used to identify Antenatal booking samples for patients who are RhD neg
Â Patient sent a letter, information leaflet and semi completed request card
Â Sample bled at 16 week appointment and sent to the Lab
Â Lab co-ordinate sending the sample to NHSBT and ensuring the results are available on EPR
The results

Â We decided to opt for paperless results
Â We print off the report from SPICE – every week
Â Admin assistant records the result in our monitoring database and enters the result on LIMS
Â BMS checks the results in LIMS against the printed copy and authorises the report.
How we result

Examples: Predicted RhD neg baby

Specimen number J,18.0099847.N Requested 01.11.18 09:21 Required
Analytical category Routine Quantity Product
Request FFDNA Specimen comment
Set FFDNA FREE FETAL DNA c Reportable (Sarah Henton on 08/11/18 14:08)
Comments Free Fetal DNA results: fetal group RhD NEGATIVE
NO PROP D IS REQUIRED FOR THIS PREGNANCY AND DELIVERY
Results refer only to current pregnancy. Performed at IBGRL
PLEASE SEND A CORD SAMPLE AT DELIVERY
Predicted RhD pos baby

Specimen number J,18.0096797.K Requested 08.10.18 13:44 Required
Analytical category Routine Quantity Product
Request FFDNA Specimen comment
Set FFDNA FREE FETAL DNA c Reportable (Sarah Henton on 15/10/18 15:03)
Comments Free Fetal DNA result: Fetal group RhD POSITIVE
Proph Anti-D is REQUIRED for this pregnancy and delivery
Results refer only to current pregnancy. Performed at IBGRL
PLEASE SEND A CORD SAMPLE AT DELIVERY
Inconclusive results

Specimen number J,18.0096796.C Requested 08.10.18 13:43 Required
Analytical category Routine Quantity Product
Request FFDNA Specimen comment
Set FFDNA FREE FETAL DNA c Reportable (Sarah Henton on 15/10/18 14:56)
Comments Free Fetal DNA: test inconclusive
Proph Anti-D is REQUIRED for this pregnancy and delivery
Results refer only to current pregnancy. Performed at IBGRL
PLEASE SEND A CORD SAMPLE AT DELIVERY
Getting the results to where they are needed

The results are needed in a variety of places

- GP Practise
- Community midwife
- Trust antenatal services
- Delivery suite
- ED
- Potentially other hospitals!
GP practise

Â Results are sent directly to the GP Practise via our GP link
Â This means the results are available for the GP and the community midwives within the practise
Within the Trust

- We send all results from GPs to the Electronic Patient Record (EPR)
- This includes cFFDNA results
The Patient

- We take the sample at the 16 week appointment
- So patient not seeing midwife routinely until 28 weeks
- Most want to know the results of the testing
Patient continued

- Antenatal screening co-ordinator team taken on the role of sending the results to the patient
- Send out a copy of Spice report to the patient
- Include a letter explaining the results and asking the patient to put the result sheet in their handheld notes
- This also means they are available if the patient is admitted to another trust!
At delivery

Å Results are available either in the patient handheld notes or on EPR!
Å So prophylactic anti-D is only given if the results are predicted RhD pos baby or inconclusive
Å As advised by NHSBT we request a cord sample at delivery
Follow up

• Retrospectively compare predicted result with cord group
• Approximately 5% of patient’s don’t have a cord sample collected
  • We’ve investigating why currently
Follow up continued

Â We’ve had 2 results which were predicted incorrectly
   Â Both we predicted to be RhD pos and were RhD neg
   Â So anti-D was used unnecessarily

Â We’ve also had 4 results which were predicted to be RhD pos and initially appeared to be RhD neg on a cord.
   Â Further follow up showed a weak D status in the baby
   Â Before introduction of cFFDNA – these would be been called Rh D neg and no anti-D given!
Summary

Å Handling cFFDNA results can seem complex
Å Consider the use of coded comments in the Lab IT system – to make things simpler
Å Consider who needs to have access to the results and how best to achieve this
Å Patient involvement is important
Å Follow up cord samples are still recommended