Clinical Impact of Fetal DNA Screening

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Screening introduced February 2016

- Process
- Throughput and results
- Acceptance
- Pitfalls
- Clinical case
- Service improvement and cost saving

Process

- Booking sample trigger for making offer
- Letter, information sheet and form sent directly to woman
- Advice to have sample taken at routine 16 week appointment
- Results imported into EPR
- Letter and copy report sent to woman

Throughput and results

- Approx 1000 samples a year
- Approx 60% predicted Rh D positive
- Approx 40% predicted Rh D negative
- 47 inconclusive – Rh D positive on cord blood

Acceptance

- High uptake suggest test is accepted by women
- Clinical staff embraced implementation and process now well embedded in practice

Pitfalls

- Change of address
- Name changes
- Long names
- Labelling errors

Repeated APH

- Knowing predicted fetal Rh D genotype has been helpful in management of women who have repeated ante partum haemorrhage.

Discrepant results

- 3 samples which appeared to be incorrect prediction
- Predicted RhD pos on fetal DNA
- RhD neg on cord blood sample
- On further testing, all 3 cord samples showed a weak expression of the RhD gene
- Low levels of the corresponding antigen on the red cell surface led to incorrect serological grouping of the cord sample.
- Without the fetal DNA, this could have resulted in omission of important anti D prophylaxis.

Service improvement and cost saving

- Overall this screening has seen improvement to the service we can offer women
- Decrease in use of Anti D prophylaxis has reduced cost by 25%

Thank you

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