

# Lab Matters 15.12.14

Mrs Maggi Webb  
Blood Transfusion Manager  
North Devon District Hospital

# Alloantibodies and pregnancy

Healthy baby



Baby with severe jaundice



ADAM

Northern Devon Healthcare **NHS**  
NHS Trust

Incorporating community services in Exeter, East and Mid Devon

# Alloantibodies and pregnancy



# Alloantibodies and pregnancy

- BCSH guidelines 2006
- ABO and D typing
- Red cell antibody screening/identification

Screening cells C,c,D,E,e,K,k,Fy<sup>a</sup>,Fy<sup>b</sup>,Jk<sup>a</sup>,Jk<sup>b</sup>,M,N,S,s,Le<sup>a</sup>

Homozygous expression of Rh, Fy, Jk, S antigens

- Follow up tests
- Main recommendations

# Alloantibodies and pregnancy

- Sample labelling
- ABO and D grouping
- Antibody screens
- Timing of tests

(early in pregnancy and again at 28/40)

- Labs to keep records of anti-D administration
- FMU referrals

# Alloantibodies and pregnancy

- Antibody card
- Post delivery testing of babies
- Regular audit of practice

# Alloantibodies and pregnancy

- Clinically significant antibodies (IgG)
  - Anti-D
  - Anti-c
  - Anti-K
  - Anti-C
  - Anti-E
  - Anti-Fy<sup>a</sup>
  - Anti-Jk<sup>a</sup>
  - Other antibodies

# Alloantibodies and pregnancy

- Anti-D+C specificity
- Possible anti-G

demonstrated by disproportionately high titres of anti-C

- **ALWAYS** refer to reference lab as patients with anti-G are still eligible for RAADP and post delivery anti-D Ig



# Alloantibodies and pregnancy

- Anti-D quantification (NIBSC 2003)
  - Differentiation between immune and prophylactic anti-D
  - Test every 4 weeks to 28/40 then
  - Test every 2 weeks to delivery
- |           |                              |
|-----------|------------------------------|
| <4iu/ml   | HDN unlikely                 |
| 4-15iu/ml | Moderate risk of HDN         |
| >15iu/ml  | High risk of hydrops fetalis |

# Alloantibodies and pregnancy

- Techniques

CAT

Capture

Tube

- Paternal Testing
- Fetal genotyping
- Referral to NHSBT

# Alloantibodies and pregnancy

- Anti-c quantification (NIBSC 2003)
- Test every 4 weeks to 28/40 then
- Test every 2 weeks to delivery

<7.5iu/ml

Continue to monitor

7.5-20iu/ml

Risk of moderate HDN

>20iu/ml

Risk of severe HDN

# Alloantibodies and pregnancy

- Anti-K titration
- Anti-K often present as a result of previous transfusion
- If paternal sample K Negative
- Severity not correlated with antibody titre
- Affected pregnancies usually titre of 32 +

# Alloantibodies and pregnancy

- Other antibodies
- Many other specificities
- Repeat testing at 28/40
- No further testing recommended
- Medical decision regarding women with hx of HDN

# Alloantibodies and pregnancy

## A CAUTIONARY TALE

# Alloantibodies and pregnancy

- Result at booking
- PAD issued for 28/40
- Result at 28/40
- rr test
- Delivery
- Changes made

# Alloantibodies and pregnancy

- Always check with midwives
- rr screening cells
- BMS band 6 or above to check results
- General paranoia



# Alloantibodies and pregnancy



THANK YOU  
ANY QUESTIONS??