Alloantibodies and pregnancy
Alloantibodies and pregnancy
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- BCSH guidelines 2016
- ABO and D typing
- Red cell antibody screening/identification
  - Screening cells C,c,D,E,e,K,k,Fya,Fyb,Jka,Jkb,M,N,S,s,Lea
  - Homozygous expression of Rh, Fy, Jk, S antigens
- Follow up tests
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MAIN RECOMMENDATIONS

- 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
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MAIN RECOMMENDATIONS

- FMU referrals
- Antibody Card
- Post delivery testing of babies
- Regular audit of practice
Clinically significant antibodies (IgG)

- Anti-D
- Anti-c
- Anti-K
- Anti-C
- Anti-E
- Anti-Fya
- Anti-Jka
- Other antibodies
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- Anti-D+C specificity
- Possible anti-G
  Demonstrated by disproportionately high titres of anti-C

**ALWAYS** refer to a reference lab as patients with anti-G are still eligible for RAADP and post delivery anti-D Ig
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- Techniques
  - CAT Capture Tube
- Paternal testing
- Fetal genotyping
- Referral to reference laboratory
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- 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
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- 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
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- Anti-K titration
- Anti-K often present as a result of previous transfusion
- Severity not correlated with antibody titre
- Affected pregnancies usually titre of 32+
- Paternal sample K negative
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- Other antibodies
- Many other specificities
- Repeat testing at 28/40
- No further testing recommended
- Medical decision regarding women with hx of HDN
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Prophylactic anti-D
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- Routine ante-natal anti-D prophylaxis (RAADP)
  - 1500iu at 28/40 gestation
  OR
  - 500iu at 28/40 and again at 34/40
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- BCSH guidelines 2013
  Administration of anti-D immunoglobulin for the prevention of HDFN

- NICE guideline 2008
  Routine antenatal anti-D prophylaxis for women who are rhesus D negative

- RCOG guidelines 2011 (Archived)
  The use of Anti-D for Rhesus (D) prophylaxis
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Potentially sensitising events

- Amniocentesis, chorionic villus biopsy and cordocentesis
- Ante-partum haemorrhage/vaginal bleeding in pregnancy
- External cephalic version
- Fall or abdominal trauma
- Ectopic pregnancy
- Evacuation of molar pregnancy
- Intrauterine death and stillbirth
- In utero therapeutic interventions (transfusion, surgery, insertion of shunts, laser)
- Miscarriage, threatened miscarriage
- Therapeutic termination of pregnancy
- Delivery – normal, instrumental or Caesarean section
- Intraoperative cell salvage
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- Miscarriage or painless PV bleeding at <12 weeks, no anti-D required unless surgical intervention
- T.O.P./Ectopic pregnancy/Molar pregnancy need PAD
- Any sensitising event after 12/40 gestation regardless of whether RAADP has been given or is due to be given
- Guidelines say at least 250iu but thanks to our “friends” at BPL……
- Between 12 – 20 weeks give 500iu
- >20 weeks perform Kleihauer (or flow) and give at least 500iu
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A CAUTIONARY TALE
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- Result at booking
- PAD issued for use at 28/40
- Result at 28/40
- rr test
- Delivery
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**CHANGES MADE**

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