Bwrdd Iechyd Prifysgol
Abertawe Bro Morgannwg
University Health Board

Management of Anaemia in Pregnancy

Speciality:	Maternity
Approval body:	Antenatal Forum
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Management of Anaemia in Pregnancy

- Anaemia in pregnancy is common, with iron deficiency being the main cause, affecting up to 25% of the UK antenatal population, and up to 40% worldwide. During pregnancy the volume of blood increases by 30%, requiring an increase in the amount of iron required to make enough haemoglobin. In addition there are fetal requirements for iron, and as a result there is a 3 fold increase for iron during pregnancy. Some of this demand will be met by iron stores, but when these run out then haemoglobin production is reduced and anaemia occurs. Dietary sources rich in iron include red meat, fish and poultry.

- Management of anaemia in pregnancy is important as it has many associations with poorer obstetric outcomes. Symptoms can be varied and non-specific, but include fatigue, pallor, weakness, headache, breathlessness, irritability and feeling cold. It also increase susceptibility to infections, can cause disturbances in cognition and emotion affecting performance and concentration. It is also implicated in preterm labour, small for gestational age babies, and impaired mental development in the infant.

- Screening for anaemia should occur at booking and again at 28/40. In addition multiple pregnancies should be screened at 24/40. Anaemia is defined as a haemoglobin of <110mg/L in the first trimester, <105mg/L in the second and third trimester, and <100mg/L postnatally. Iron deficiency is likely where the MCV (mean cell volume) and MCH (mean cell haemoglobin) are also low. Other rarer causes of anaemia should also be considered such as haemoglobinopathy, pernicious anaemia (vit B12 deficiency) and malabsorption problems. In these cases management should be in conjunction with a haematologist, and it is useful to check the serum ferritin levels (which reflect iron stores) and treat with iron if the ferritin is low (<30micrograms/L).

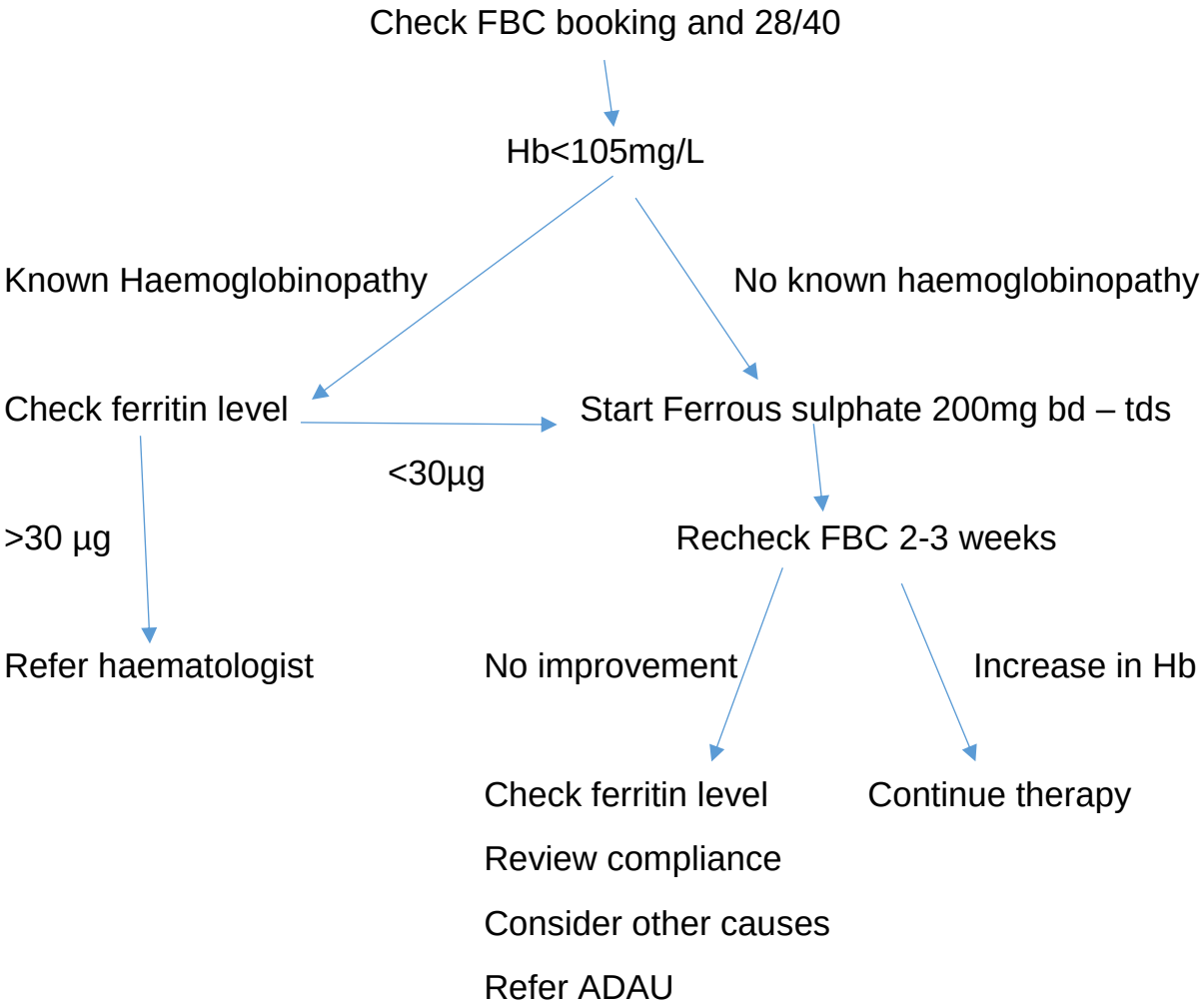
- Risk factors for anaemia include heavy menstrual loss pre-pregnancy, recurrent bleeding, teenagers, vegetarians, and previous delivery within 1 year.

- In the absence of other causes for anaemia it is appropriate to start treatment with oral iron. There are different types of iron salts, but treatment should aim to provide 100-200mg of elemental iron a day (200mg of ferrous sulphate or ferrous fumerate provides 65mg of iron). Iron should be taken on an empty stomach 1 hour before food with a source of vitamin C which enhances absorption (such as fresh orange juice). Calcium rich products inhibit absorption and should be avoided within the hour (such as dairy products, tea, and antacids). Cereals also reduce absorption. A rise in Hb should be demonstratable by 2 weeks, a rise of 20mg/L by 4 weeks. Failure to respond

to oral therapy should be investigated further by checking compliance and considering other causes, perform a haemoglobinopathy screen (if not already had) and check ferritin levels. In the absence of other causes for anaemia referral to Antenatal Day Assessment is appropriate for consideration of parenteral iron (see Monofer Guideline).

- The main side effects of iron are related to gastric irritation, including nausea and epigastric pain. In addition constipation or diarrhoea may occur. Excess iron is faecally excreted turning faeces black. Side effects are often related to the amount of elemental iron being given. Enteric coated or sustained release preparations are not beneficial as the majority of the iron is not absorbed.

- Once the haemoglobin has normalised, iron therapy should be continued for 3 months and / or 6 weeks postnatal to replenish the iron stores.


Check FBC booking and 28/40
Hb<105mg/L
Known Haemoglobinopathy
No known haemoglobinopathy
Check ferritin level
Start Ferrous sulphate 200mg bd – tds
<30µg
>30 µg
Recheck FBC 2-3 weeks
Refer haematologist
No improvement
Increase in Hb
Check ferritin level
Review compliance
Consider other causes
Refer ADAU
Continue therapy

References

- Antenatal Care for Uncomplicated Pregnancies. NICE Guideline 62. Updated Jan 2017
- Blood Transfusions in Obstetrics. RCOG Greentop guideline 47. May 2015
- Management of Iron Deficiency in Pregnancy. Pavord S., Myers B., Robinson S., Allard S., Strong J., Oppenheimer C. British Journal of Haematology. March 2012. Vol 156 (5): 588-600.

Maternity Services

Checklist for Clinical Guidelines being Submitted for Approval
by Maternity Quality & Safety Group

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Name(s) of Author:	Louise-Emma Shaw
Chair of Group or Committee supporting submission:	Antenatal Forum
Issue / Version No:	1
Next Review / Guideline Expiry:	13th July 2021
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Please indicate key words you wish to be linked to document	Anaemia, iron
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File Name: Used to locate where file is stores on hard drive	