National Comparative Audit of Blood Transfusion

NHS Blood and Transplant

2018/19 Audit of the Management of Maternal Anaemia and Iron deficiency in the UK and Republic of Ireland

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2018/2019 Audit of Maternal Anaemia and Iron Deficiency

Background

In the UK between 25-40% of women who are pregnant become iron deficient, and around 200,000 per year are anaemic during pregnancy. Anaemia in pregnancy has been associated with poor outcomes such as preterm birth, low birth weight and increased risk of postpartum haemorrhage.

Audit Aims

To determine prevalence of anaemia in pregnancy and the first 6 weeks postpartum, and provide comparative data regarding screening, recognition and treatment. The audit also aims to review adherence to NICE and BSH guidelines, and pregnancy outcomes of anaemic women in comparison to those who were not.

86 Maternity Units participated

860 Births were included in the data collection

Conducted between Nov 2018 and March 2019

Key findings of 2018/ 2019 audit

97-98% of pregnant women were screened for anaemia at first presentation of pregnancy, ideally in the first trimester, and again at 28 weeks gestation

30.4% overall prevalence of anaemia in all women screened (262/ 845), in accordance with BSH Hb levels, regardless of diagnosis.

a total of **55** women were started on oral iron during their pregnancy

2.6% of women were found to be anaemic in the first trimester (20/765), rising to 4.14% (35/845) when including those whose "booking in" was after their first trimester.

Only **half** commenced oral iron therapy

16.3% (133/815) women screened, received a new diagnosis of anaemia at 28 weeks

only **30%** of these women were started on oral iron treatment

41.3% of women tested upto 6 weeks post -partum were found to be anaemic

of which **74%** were started on oral iron and discharged home on treatment

Of those diagnosed with anaemia a higher prevalence was observed in black, asian and minority women. They were also found to be more at risk of blood loss post delivery.

Standards

Audit standard	2018/ 2019 audit observation

Definitions of anaemia:

The standards for the audit were derived from the guidelines of the British Society of Haematology and NICE.

Antenatal anaemia is defined as:
- *Haemoglobin (Hb) <110g/L in the first trimester*
- *Hb <105g/L in the second and third trimester.*
- *Postnatal anaemia is defined as Hb <100g/L*

Audit observation:

87% of sites had a policy for identifying and managing maternal anaemia

219 of 262 women were *diagnosed* as anaemic. 43 remained *undiagnosed* despite Hb levels falling below guideline thresholds

Screening for anaemia:

FBC offered at first appointment (8-12 weeks' gestation) and repeated at 28 +/- 2 weeks' gestation.

Women who present at other times with symptoms are offered a FBC.

FBC offered no sooner than 6 hours postpartum if:
- *estimated blood loss is > 500mls*
- *delivered by caesarean section*
- *symptoms of anaemia post-delivery*
- *antenatal anaemia has not been fully corrected.*

Audit observation:

88.9% women had their Hb checked in the 1st trimester. 2.6% of this group were anaemic

66 women presented for the first time later than 14 weeks and 6 days.

94.4% women had their Hb checked around 28 weeks' gestation. 16.3% were found to be anaemic.

431/860 women were screened postnatally. 41.3% of women were found to be anaemic

Women at risk of Iron deficiency and anaemia:

Women identified to be at increased risk of iron deficiency offered a ferritin test upon presentation.

If serum ferritin is < 30ug/l a prophylactic dose of oral iron is prescribed for the duration of pregnancy

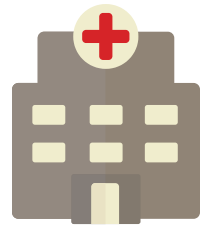
If these women develop anaemia the prophylactic iron dose is increased to a treatment dose.

Audit observation:
59/72 (82%) sites conducted routine haemoglobinopathy screening on all pregnant women who presented for care.

3.4% women were known to have a haematological disorder prior to pregnancy (2.3% was iron deficiency).

27.7% women were reported to have a medical condition that may impact Hb levels or low Hb at presentation

47 women had haematinics checked



Treatment:

Women identified with iron deficiency anaemia are offered oral iron or IV iron supplementation

Women are offered written information on the correct administration of iron and how to maximise absorption

Audit observation:

55 /219 diagnosed women were commenced on oral iron

17 women were given an IV iron preparation.

49 women were started on oral iron antenatally.

15 were deemed not applicable for treatment, even though by NICE and BSH standards they were anaemic.

Written information was given to 14/219 women who were diagnosed with anaemia

Dietary advice was given 25/219 women who were diagnosed with anaemia in pregnancy

Follow up Treatment:

A full blood count is repeated 2 - 4 weeks following the start of therapeutic iron treatment.

Assessment of tolerability and GI symptoms for women taking oral iron and advice given

Audit observation:

64% (35/55) women started on oral iron received follow up after 2 weeks

9 women reported GI side effects

9 women reported no side effects

Referral:

For women with:
- *significant symptoms*
- *severe anaemia (Hb <70g/L)*
- *anaemia at greater than 34 weeks' gestation, who fail to respond to oral treatment*

to secondary care specialist obstetrician or haematologist

Women who cannot tolerate oral iron are offered parenteral iron from the second trimester onwards.

Audit observation:

35 women were found to have an inadequate response to oral iron-

7 were already in secondary care
1 was referred to secondary care
11 not referred
16 unknown

17 women received IV iron

97% of sites reported having mechanisms in place to refer to a haematologist

Recommendations

Hospitals should review

Local guidelines for the detection and management of anaemia in pregnancy to ensure they align local guidance with the latest BSH and NICE guidelines.

Clinical recommendations:

Act on all gestationally adjusted abnormal Hb results within 2 weeks by starting affected women on treatment.

Treat with oral iron in the first instance. Document type, frequency and dose of iron in the care record.

Provide written information on how to take oral iron to maximise absorption.

Provide written dietary information to maximise the availability of iron through diet.

Review anaemic women within 2 to 4 weeks of starting treatment depending upon the gestation.

Document the response to treatment and any side effects experienced by the woman.

If the response is sub-optimal, (<10-20g/L), check the woman's level of B12 and folate, and treat accordingly.

Provide clear documentation and a plan for primary care detailing the on-going management required in the postnatal period.

Clinical Audit recommendations:

Audit local screening uptake at the first trimester/presentation and at 28 weeks ensuring that it exceeds 95%.

Audit the testing and treatment in the pueperium to ensure that all at-risk women are tested.