

A SYSTEMATIC REVIEW OF NATIONAL AND INTERNATIONAL GUIDELINES FOR THE DIAGNOSIS AND MANAGEMENT OF IRON DEFICIENCY ANAEMIA IN PREGNANCY

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OBJECTIVE

Anaemia in pregnancy is a global health problem, it is estimated that 41.8% of pregnant women are anaemic.(1) Screening for iron deficiency during pregnancy and iron supplementation is recommended by national and international pregnancy guidelines. The aim of this review is to assess the similarities and differences of national and international guidelines for the diagnosis and management of iron deficiency anaemia (IDA) in pregnancy.

DESIGN

A systematic review was performed to identify and review all published national and international guidelines.

METHODS

Embase and Ovid MEDLINE were searched from inception to February 2023 using combined keywords covering IDA and pregnancy. The search was limited to humans and the English language. National and international published guidelines and committee consensus which reviewed iron deficiency or iron deficiency anaemia in pregnant women were included. Original research, regional and local guidelines were excluded. Reference lists of eligible publications and relevant websites were hand-searched for additional publications.

RESULTS

Eight country guidelines and five international guidelines were identified for inclusion. Ten guidelines recommended screening for iron deficiency anaemia during pregnancy, seven of which recommended screening at booking and at 28 weeks gestation (Table1). Ten guidelines specified ferritin as a diagnostic marker for iron deficiency(1-3,6-9,11-13), while two cautioned against its use due to a lack of evidence.(4,6) Of the 11 publications which specified diagnostic criteria for anaemia, five used haemoglobin (Hb) of 110 g/L in the first and third trimester and Hb 105 g/L in the second(2,3,6,8,12), five used Hb of 110 g/L in the first trimester and Hb 105 g/L in the second and third trimester(1,7,10,11,13), and one publication used Hb 110 g/L for diagnosis of anaemia in all trimesters of pregnancy.(5) All papers recommended the use of oral iron supplementation to treat iron deficiency or IDA, however only four publications recommended a time frame in which to re-check haemoglobin (Table 1). Eleven guidelines recommended the use of intravenous iron infusion following failure of oral iron therapy, or in the setting of non-compliance or intolerance. Seven guidelines specified that the use of intravenous iron should only be considered in the context of IDA, whilst five guidelines additionally recommended its use in the context of iron deficiency alone (Table 1).

CONCLUSION

This systematic review of international and national guidelines demonstrates that there is general consensus on the diagnosis of iron deficiency using ferritin and the treatment of IDA and iron deficiency using oral iron supplementation. The review highlights that different diagnostic criteria is used globally to diagnose anaemia in the third trimester. Additionally, the review demonstrates that there is a lack of consensus as to if intravenous iron infusions should only be used in the context of IDA, or additionally to treat iron deficiency in pregnancy.

Guideline	Recommendation for screening for iron deficiency	Recommendation for timeframe for trial of oral supplementation	Guidelines for use of IV iron	Does there need to be a diagnosis of IDA for infusion
British Society for Haematology (1)	First visit and 28 weeks	2-3 weeks	When oral iron is not tolerated, lack of compliance, insufficient time before delivery for oral iron to be effective	Yes
American College of Obstetricians and Gynecologists (2)	First visit and 28 weeks	Not Specified	When oral iron is not tolerated, lack of compliance, insufficient time before delivery for oral iron to be effective	No
Red Cross Australia LifeBlood (3)	First visit, 24-28 weeks	4 weeks	Failed response to oral iron, non-compliance, intolerant	Yes
US Preventative Taskforce (4)	Does not recommend routine screening	Not Specified	Not Specified	No
International Federation of Gynaecology and Obstetrics (FIGO) (5)	First visit and 28 weeks	Not Specified	Failed response to oral iron or intolerant	No
Expert panel on the treatment of IDA in pregnant and postpartum women in the Asia-Pacific region (6)	Not specified	Not Specified	Recommended at any time	No
Australian Government Pregnancy Care Guidelines (7)	First visit and 28 weeks	Not Specified	Failed response to oral iron, non-compliance, intolerant	Yes
Federation of Obstetric and Gynaecological Societies in India (8)	Not specified	Not Specified	When oral iron is not tolerated, lack of compliance, insufficient time before delivery for oral iron to be effective	Yes
Network for the Advancement of Patient Blood Management, Haemostasis and Thrombosis (NATA) (9)	First visit and 28 weeks, or any time a woman displays symptoms of anaemia	Not Specified	When oral iron is not tolerated, lack of compliance, diagnosis after 34 weeks' gestation, Hb <80 g/L	Yes
Green-top Guideline, Royal College of Obstetricians and Gynaecologists (10)	First visit and 28 weeks	>2 weeks	When oral iron is not tolerated, lack of compliance, insufficient time before delivery for oral iron to be effective	No
World Health Organisation (11)	First visit	Not Specified	Not Specified	Not Specified
Iron Deficiency Working Group (12)	Each trimester	Not Specified	When oral iron is not tolerated, Hb <90 g/L, or the presence of risk factors for PPH	Yes
Danish Society of Obstetrics and Gynecology (13)	First visit and 28 weeks, or any time a woman displays symptoms of anaemia	2-4 weeks	Failed response to oral iron or intolerant, severe anaemia	Yes

Table 1. Summary of recommended screening for iron deficiency in pregnancy, and guide for oral and intravenous iron treatment.

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