TITLE: Intravenous versus Intramuscular Iron Supplementation for Adult Patients: Comparative Clinical Effectiveness, Comparative Safety, and Guidelines

DATE: 19 May 2011

RESEARCH QUESTIONS

1. What is the comparative clinical effectiveness of intravenous versus intramuscular iron supplementation for adult patients requiring iron supplements?

2. What is the comparative safety of intravenous versus intramuscular iron supplementation for adult patients requiring iron supplements?

3. What are the evidence-based guidelines regarding intravenous and intramuscular iron supplementation?

KEY MESSAGE

Evidence suggests that intravenous iron supplementation is recommended for hemodialysis dependent chronic kidney disease patients with anemia.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2011, Issue 4), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies containing safety data, and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2006 and May 5, 2011. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

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RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

One guideline was identified pertaining to the comparative clinical effectiveness, comparative safety, and evidence-based guidelines of intravenous versus intramuscular iron supplementation for adult patients requiring iron supplements. Additional studies of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

One guideline\(^1\) strongly recommended that patients with anemia in hemodialysis dependent chronic kidney disease should receive iron agents intravenously. Patients with anemia in non-dialysis dependent or peritoneal dialysis dependent chronic kidney disease can receive iron agents intravenously or orally. Monitoring recommendations state that resuscitative medication and appropriate personnel should be available when doses of iron dextran are administered.
REFERENCES SUMMARIZED

Health technology assessments
No literature identified.

Systematic reviews and meta-analyses
No literature identified.

Randomized controlled trials
No literature identified.

Non-randomized studies
No literature identified.

Guidelines and recommendations

   See: Section 3.2.5, Route of Administration and 3.2.6 Hypersensitivity Reactions

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APPENDIX – FURTHER INFORMATION:

Systematic reviews - alternate population of interest


Randomized controlled trials – alternate comparators


Guidelines and recommendations – methods not specified

See: Treatment and Monitoring, Sections XI and XIII, page 4

Review articles

See: Specific Indications for Parenteral Iron, page 3

See: Parenteral Iron Therapy, page 4