

Preoperative intravenous iron for anaemia in elective major open abdominal surgery: the PREVENTT RCT

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Plain English summary

The PREVENTT RCT

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Plain English summary

In patients undergoing major surgery, anaemia (low blood count) is a common problem. Anaemia is often a consequence of the disease necessitating surgery and can make people feel tired and unwell. Anaemia increases the need for a blood transfusion at the time of surgery, and patients with anaemia have more complications from surgery, prolonged hospital stay and delayed recovery.

Iron deficiency is the most common cause of anaemia. An iron infusion has been shown to be effective to rapidly treat anaemia, but it is not known if this is effective in treating anaemia in the presurgical setting, and whether or not this may benefit patients.

The main aim of this study was to assess if intravenous iron can treat anaemia in patients before major surgery and if this will reduce the need for blood transfusion, make patients feel better and, consequently, help them do better during and after surgery.

A total of 487 patients with anaemia were recruited from 46 UK hospitals before major abdominal surgery. Patients were randomly allocated to receive an infusion of iron or placebo 10 days to 6 weeks before their surgery. Patients were followed up at 8 weeks and 6 months after their surgery.

Intravenous iron increased the blood count in patients before surgery. There was no difference in blood transfusion rates or patient deaths between those who received intravenous iron and those who received placebo. Similarly, there was no difference in the patients' postoperative complications or length of hospital stay. Patients who received iron had a higher blood count at 8 weeks and 6 months post operation and there were fewer re-admissions to hospital for complications.

In conclusion, for patients undergoing major surgery, giving intravenous iron to treat anaemia before the operation did not reduce the need for blood transfusion. Further work is needed to evaluate whether or not there is any benefit after discharge from hospital.

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