

## **Efficacy and safety of intravenous iron therapy as an alternative/adjunct to allogeneic blood transfusion.**

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Anaemia is a common condition among patients admitted to hospital medicosurgical departments, as well as in critically ill patients. Anaemia is more frequently due to absolute iron deficiency (e.g. chronic blood loss) or functional iron deficiency (e.g. chronic inflammatory states), with other causes being less frequent. In addition, preoperative anaemia is one of the major predictive factors for perioperative blood transfusion. In surgical patients, postoperative anaemia is mainly caused by perioperative blood loss, and it might be aggravated by inflammation-induced inhibition of erythropoietin and functional iron deficiency (a condition that cannot be corrected by the administration of oral iron). All these mechanisms may be involved in the anaemia of the critically ill. Intravenous iron administration seems to be safe, as very few severe side-effects were observed, and may result in hastened recovery from anaemia and lower transfusion requirements. However, it is noteworthy that many of the recommendations given for intravenous iron treatment are not supported by a high level of evidence and this must be borne in mind when making decisions regarding its application to a particular patient. Nonetheless, this also indicates the need for further large, randomized controlled trials on the safety and efficacy of intravenous iron for the treatment of anaemia in different clinical settings.