Abstract
Perioperative anaemia, with iron deficiency being its leading cause, is a frequent condition among surgical patients, and has been linked to increased postoperative morbidity and mortality, and decreased quality of life. Postoperative anaemia is even more frequent and is mainly caused by perioperative blood loss, aggravated by inflammation-induced blunting of erythropoiesis. Allogenic transfusion is commonly used for treating acute perioperative anaemia, but it also increases the rate of morbidity and mortality in surgical and critically ill patients. Thus, overall concerns about adverse effects of both preoperative anaemia and allogeneic transfusion have prompted the review of transfusion practice and the search for safer and more biologically rational treatment options. In this paper, the role of intravenous iron therapy (mostly with iron sucrose and ferric carboxymaltose), as a safe and efficacious tool for treating anaemia and reducing transfusion requirements in surgical patients, as well as in other medical areas, has been reviewed. From the analysis of published data and despite the lack of high quality evidence in some areas, it seems fair to conclude that perioperative intravenous iron administration, with or without erythropoiesis stimulating agents, is safe, results in lower transfusion requirements and hastens recovery from postoperative anaemia. In addition, some studies have reported decreased rates of postoperative infection and mortality, and shorter length of hospital stay in surgical patients receiving intravenous iron.

Keywords
Perioperative anaemia, Allogenic transfusion, Intravenous iron, Safety, Efficacy.