Complete Spontaneous Resolution of Extensive Haemosiderin Staining Following Intravenous Iron Extravasation in Pregnancy

A Case Report

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BACKGROUND

Intravenous iron is increasingly used in pregnancy to treat iron deficiency anaemia, given its efficacy and rapid haematologic response. Cutaneous haemosiderin staining from iron extravasation is a rare but distressing complication, producing persistent brown to slate-grey hyperpigmentation. It is widely described as prolonged or permanent, with management focused on laser-based intervention, and no well-documented cases of complete spontaneous resolution with long-term photographic follow-up have previously been reported.

AIMS

To describe a case of extensive haemosiderin staining following intravenous iron extravasation in pregnancy that resolved completely without intervention, and to provide longitudinal evidence supporting expectant first-line management.

CLINICAL SIGNIFICANCE

Recognising the potential for spontaneous resolution could reduce unnecessary laser referrals, procedural cost, and psychological distress in affected patients, particularly where access to dermatologic services is limited.

22 wks	15×7 cm	9 mo	39 mo
Gestation at time of extravasation	Area of hyperpigmentation at one month	Onset of spontaneous fading	Time to complete resolution

CASE PRESENTATION

A nulliparous woman in her twenties received intravenous iron polymaltose 1000 mg via peripheral cannula at 22 weeks of gestation for iron deficiency anaemia. Within four hours, tan-brown discolouration developed at the cubital fossa and medial upper arm, with associated swelling and heaviness. By one month, hyperpigmentation involved approximately 15 × 7 cm of the medial and posterior upper arm, with mild intermittent discomfort that gradually settled. Dermatology and Plastic Surgery confirmed the diagnosis of haemosiderin staining secondary to extravasation; laser therapy was recommended, but the patient elected for expectant management with no therapeutic intervention. She was reviewed in a subsequent pregnancy three years later: gradual spontaneous fading had begun approximately nine months post-extravasation, and complete resolution — with no residual discolouration — was confirmed at 39 months, supported by serial photographic documentation.

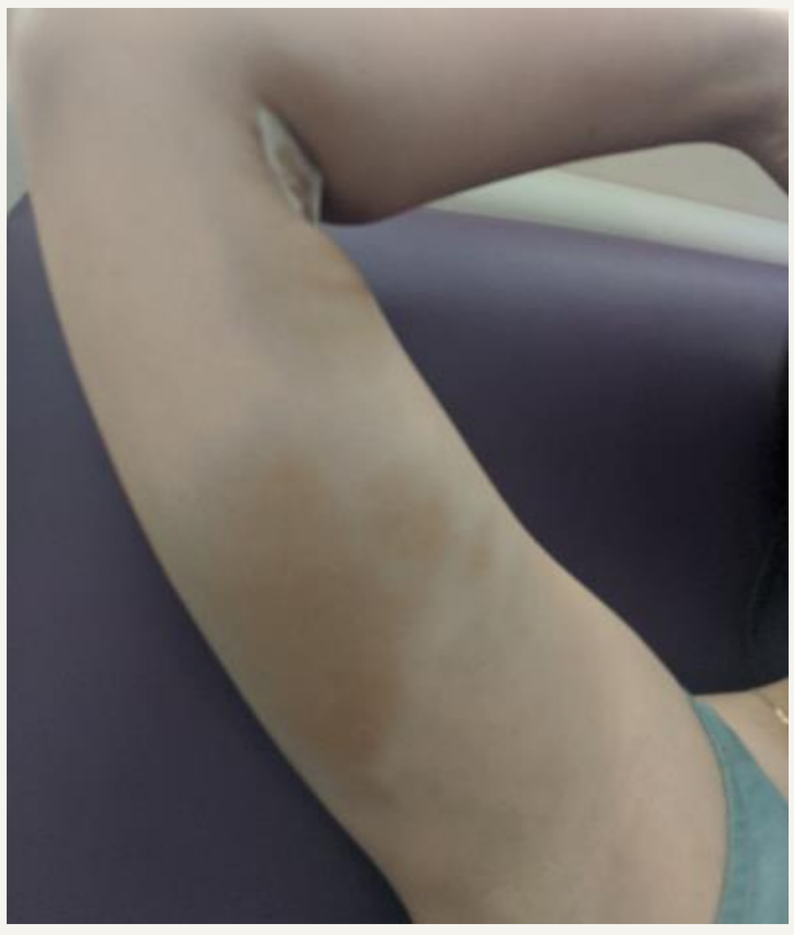

Figure 1 — Day of index infusion
Tan-brown discolouration and swelling, 4 hours post-extravasation

Figure 2 — One-month post-infusion
Extensive hyperpigmentation, approx. 15 × 7 cm

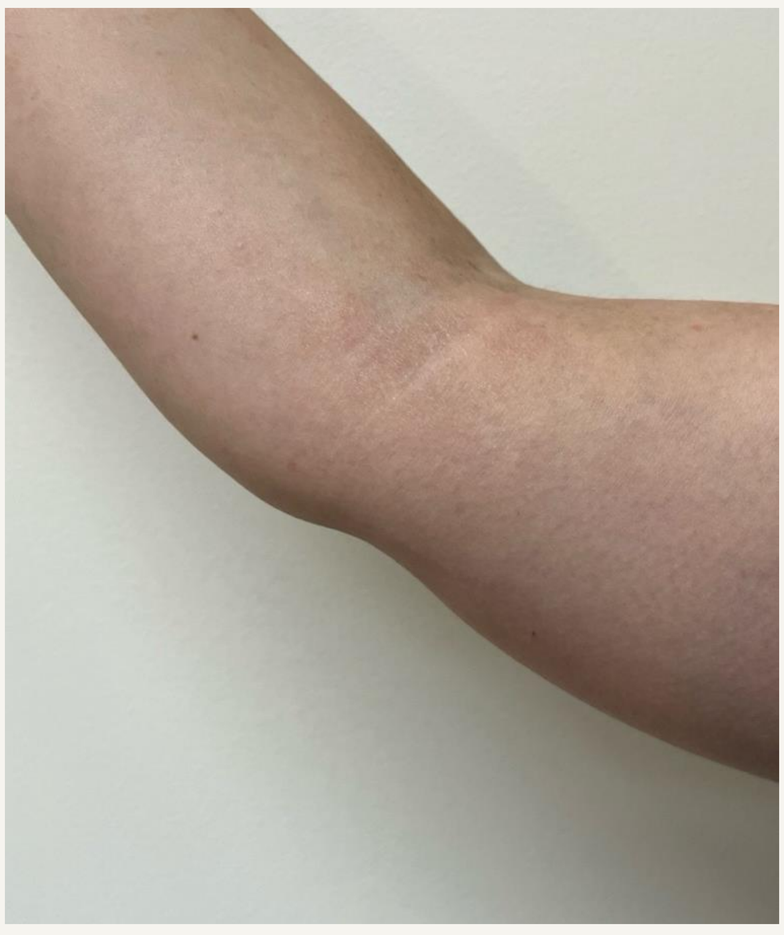

Figure 3 — 39 months post-extravasation
Complete resolution, no residual discolouration

DISCUSSION

Haemosiderin staining follows extravasation of intravenous iron into the dermis and subcutaneous tissue, with macrophage uptake producing brown to slate-grey pigmentation. The largest published series — a French pharmacovigilance analysis of 51 cases — found pigmentation persisting beyond one month in 37% of cases and beyond six months in 18%, with resolution documented in only three; follow-up was frequently limited and management strategies poorly described. Individual case reports similarly describe prolonged pigmentation lasting months to years, often prompting referral for laser therapy. Current interventional management relies on Q-switched Nd:YAG laser, typically four to six sessions, with variable and unguaranteed efficacy, considerable cost, and limited access in rural or resource-constrained settings.

CONCLUSION

This case provides longitudinal photographic evidence that complete spontaneous resolution of extensive haemosiderin staining can occur without intervention. Recognising this natural history may support expectant first-line management in selected patients, reduce procedural burden, and reassure those without access to dermatologic treatment.

Complete spontaneous resolution occurred by 39 months without any intervention — expectant management may be a reasonable first-line option in selected patients.

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Written informed consent was obtained from the patient for publication of this case report and accompanying images. The authors declare no competing interests.