

Long-term adverse effects of intramuscular oil injection

Jacob Juel,¹ Dorte Vestergaard Grejsen,² Manan Pareek³

¹Department of Plastic Surgery, Aalborg Universitetshospital, Aalborg, Denmark

²Department of Pathology, Zealand University Hospital, Roskilde, Denmark

³Heart & Vascular Center, Brigham and Women's Hospital, Boston, Massachusetts, USA

Correspondence to
Dr Manan Pareek,
mananpareek@dadlnet.dk

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DESCRIPTION

A 33-year-old male former bodybuilder presented with painful deformities located to his arms. Roughly a decade ago, he had injected liquid paraffin into his biceps and triceps as a shortcut to achieve muscular enhancement. Today, some of the oil has descended to the forearms, leaving him with painful swellings (paraffinomas) (figure 1) and paraesthesia. MRI revealed localised intramuscular distribution of liquid paraffin in the upper arm muscles (figure 2) and diffuse and localised subcutaneous distribution in the forearms. The patient is currently reviewed regularly as an outpatient and is still able to work as an engineer. A careful history has not revealed any overt systemic complications related to the injections and, so far, he has not required active treatment for his condition.

Site enhancement oils or muscle fillers are liquid compounds of medium-chain triglycerides, local anaesthetics and alcohol that can be injected into muscles to enlarge their size or to alter their shape.^{1–3} Commonly utilised options include paraffin and synthol.¹ The medical uses of paraffin include skin care and as a laxative, but when injected intramuscularly, complications such as paraffinomas (chronic sclerosing lipogranulomas), ulcerations, infection, systemic embolism and an often-negated irreversible muscle damage may develop within weeks or up to several years after abuse.² Sadly, no curative treatment is available, but surgery, corticosteroids, compressions or antibiotics may be required, depending on the presentation.³ Surgery should be reserved for the most severe cases, as it may further reduce functional performance. Vigilance is imperative for surgeons treating this condition, but even more so for those considering such cosmetic doping, given the

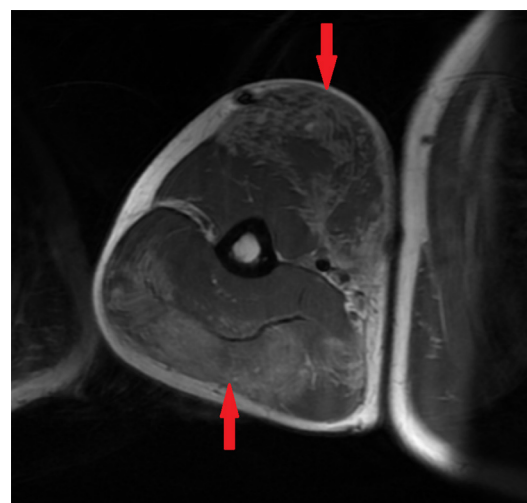


Figure 2 MRI showing localised intramuscular distribution of liquid paraffin (arrows) in the upper arm.

Learning points

- ▶ Site enhancement oils, for example, paraffin and synthol, are injected into muscles for augmentation purposes.
- ▶ Destructive complications may develop several years after (ab)use.
- ▶ No curative treatment is available, but surgery may be required for palliative purposes.

possibility of permanent destructive complications, even with short-term use.²

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Competing interests None declared.

Patient consent Obtained.

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Figure 1 Muscular hypertrophy and swellings (arrows) after liquid paraffin injection.



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