CASE REPORT

Scrotal siliconoma: complications of an unapproved substance to an uninformed public

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SUMMARY

Liquid silicone is not approved for cosmetic injections in the USA and the UK because of possible adverse reactions. Despite this ban it is, unfortunately, still used by unlicensed practitioners and is offered to an uninformed public. This case report presents a case of scrotal siliconoma in a patient who received a liquid silicone injection for scrotal augmentation in an unlicensed practice in London and developed complications. The case should serve as a warning and encourage more patient education and public awareness about the dangers of liquid silicone injection.

BACKGROUND

The use of liquid silicone for soft tissue augmentation started in Japan and dates back to the late 1940s after the Second World War. The American army in Yokohama noticed the disappearance of drums of silicone fluid from the docks; this silicone was being injected into Japanese female entertainers who sought breast augmentation.¹ This practice spread to the USA, primarily the west coast, and then to the whole world.^{1 2}

Liquid silicone is not approved for cosmetic injections in the USA and the UK because of possible adverse reactions such as granuloma formation (siliconoma), migration of the injected silicone, pulmonary embolism and even death.³ However, it is still used by unlicensed practitioners. More consumer information and awareness is required about the dangers of unlicensed products and unlicensed providers.

CASE PRESENTATION

A 56-year-old man seeking scrotal augmentation contacted an unlicensed practice in London and was offered augmentation using liquid silicone. An information leaflet misleadingly claimed the use of a 'unique injection system' and mentioned that the complication of 'hardening' occurs in 'a very small number of cases' and would last for 'the first few weeks after the procedure'.

Six months after the patient had had the silicone injection directly into his scrotum, he started noticing marked hardness and an increase in its size. He also had pain due to direct compression of the testicles in certain positions and also an inflammatory reaction and, subsequently, sought medical help for removal of the injected silicone.

An initial attempt at removal by a transverse scrotal skin incision quickly led to skin ischaemia, scrotal skin necrosis and infection, which required further operative debridement. This initial attempt did not remove all the injected silicone.

Because of the discomfort the patient sought further surgery to reduce the size of the scrotum. As the scrotum had become an amalgamated hard mass, we used intraoperative ultrasound to precisely locate and preserve the testicles. To preserve the testicles and maintain all available blood supply to the scarred skin, we used a midline incision through the median raphe. The excised specimen weighed 212 g. The diagnosis was confirmed by histopathological analysis. The patient made a satisfactory recovery. He was reviewed 2 weeks post-operatively, remained well and was satisfied with the outcome (figures 1 and 2).

Figure 1 Before and after the excision of siliconoma.

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Figure 2 The excised mass.

DISCUSSION

The first concerns about the use of medical-grade silicone were published in 1977 by Wilkie, who reported the appearance of granulomas as a complication of silicone injection.⁴ The likelihood of development of siliconoma is higher with large volumes of injection material,⁵ as was the case in this patient who was injected with 200 ml of liquid silicone. Scrotal augmentation requires larger volumes of injection material and therefore there is a higher possibility of granuloma formation.

In our case, the use of ultrasound was useful in safeguarding the testicles and delineating their precise location amidst the hard amalgamated mass of siliconoma. This approach is based on the findings by Wortsman *et al*,⁶ who reported that fillers are recognisable on ultrasound and generate different patterns of echogenicity.

Although reports of siliconoma in the penis have been published, there is a paucity of studies on siliconoma in the scrotum. To the best of our knowledge, there is only one previous case report of a siliconoma in the scrotum published in 1995.⁷ That case report was similar to ours—the patient had a debilitating granuloma and the authors recommended ‘aggressive treatment with wide local excision and appropriate soft tissue coverage’, which was the approach adopted in the management of our patient.

Despite the ban on injection of liquid silicone for cosmetic reasons, this procedure is still being offered to an uninformed public. A paper published in 2009⁵ reports the injection of silicone for lip augmentation in 179 patients and although the ‘US Food and Drug Administration has NOT approved liquid

silicone or silicone gel for injection to fill wrinkles or augment tissues anywhere in the body’,⁸ this paper reports that ‘the satisfaction level after silicone injection for lip augmentation was high and most patients would recommend this procedure to friends’. This paper, however, was commented on in the same journal and described as ‘at best irresponsible and worst dangerous’ owing to the unacceptably high complication rate of permanent or semi-permanent fillers.⁸ Our patient was not informed that it is an unapproved procedure with potentially drastic complications, including death. This case should serve as a warning and encourage more patient education and public awareness about the dangers of liquid silicone injection.

Learning points

- ▶ The US Food and Drug Administration has NOT approved liquid silicone or silicone gel for injection to fill wrinkles or augment tissues anywhere in the body, though it is still being used.
- ▶ Its use is ‘at best irresponsible and worst dangerous’.
- ▶ Patients are usually unaware that it is an unapproved procedure with potentially drastic complications, including death.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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