

Burn injury secondary to cryolipolysis: freezing fat, burning skin

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Background

- Australians are increasingly seeking cosmetic surgery, particularly non-surgical/minimally invasive procedures
- A newer technology used to reduce fat deposition is cryolipolysis or 'cool sculpting', designed to cause fat cell necrosis by cooling soft tissues to 0 to -7°C



Fig. 1: Cryolipolysis treatment to upper arm

Patient cases

- 2 cases of cryolipolysis-associated cold thermal burn injuries were seen in female patients in our unit
- 1 superficial dermal burn to the abdomen - treated conservatively
- 1 deep dermal burn to the upper lateral arm - required debridement and skin grafting (see Fig. 2)
- A review of the literature regarding these types of injuries was performed



Fig.2: Deep dermal cold thermal injury to upper lateral arm

Literature Review

A literature search revealed 3 reported cases of cryolipolysis-associated skin necrosis

- 1 do-it-yourself home fat freezing abdomen injury
- 1 beauty salon flank cryolipolysis-induced injury
- 1 plastic surgery clinic lateral thigh cryolipolysis-induced injury

Discussion

- Cold thermal injury is not a commonly-reported complication of cryolipolysis in the literature and it was not listed in potential complications on the device's website
- The observation of two such injuries in two months at our unit highlights that they may be more common than previously thought
- Complications of cosmetic procedures, their regulation, monitoring and professional credentialing are increasingly topical issues as the demand for such procedures increases