



Thigh silicone granuloma after silicone injection for gluteal augmentation



Ben Kartub, MS

David Geffen School of Medicine at UCLA

Learning Objective

To consider the diagnosis of silicone granuloma in the presentation of soft tissue mass or infection.

Case Presentation

52-year-old female with no significant past medical history presents to the Harbor UCLA Medical Center emergency room with the complaint of worsening swelling, redness, and pain on her left thigh.

She had a vague history of having an injection in her buttocks many years ago, and currently had failed clindamycin and cephalexin for cellulitis.

PE notable for an 8 by 8-centimeter area of induration on the left anteromedial thigh that was tender to palpation but not fluctuant or draining.

CT of the left lower extremity that showed significant fat stranding of the buttock and anterior, medial, and posterior thigh that was largely consistent with cellulitis, and ultrasound showed ill defined hypoechoic structures.

The surgery team consulting on the patient decided to perform an incision and drainage with possible wound exploration with concern for abscess versus foreign body.

On exploration, an area of clear viscus fluid surrounded by a firm capsule of tissue was encountered and a 15 by 8-centimeter sample of tissue was removed.

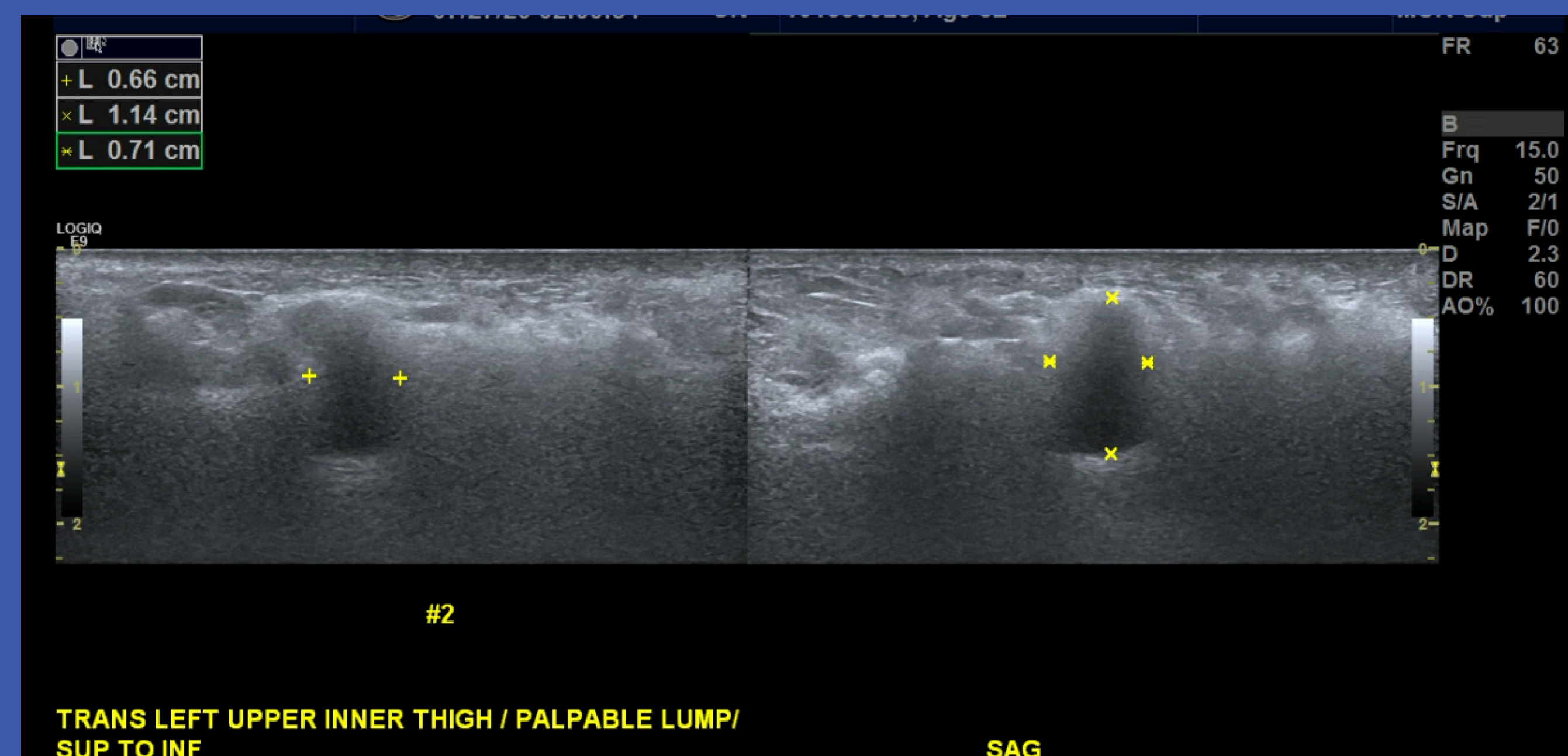
The surgical pathology report read dermal perivascular lymphohistiocytic infiltrate, variable sized vacuoles and septal fibrosis, which was suggestive of sclerosing lipogranuloma, aka silicone granuloma.

Figures/Tables



Fig 1 (above): CT showing fat stranding and soft tissue masses in the anteromedial left thigh

Fig 2 (below): Ultrasound of anteromedial left thigh showing ill defined hypoechoic structures, later determined to be silicon granulomas



Discussion

Due to lower cost, patients are seeking soft tissue augmentation from illicit sources; namely, non-physicians providing injections of unknown materials, often silicone, in residential spaces.

Even medical grade silicone, often thought safe due to its association with cosmetic surgery, is not FDA approved to be injected in an unencapsulated form due to its side effects.

When it is not encased, free silicone can migrate, and deposits of injected silicone eventually spread as large discrete masses, as small, dispersed particles, or as thin tendrils which migrate more diffusely.

The lack of a barrier between the silicone particles and normal tissue can cause a foreign body reaction, a type-four hypersensitivity reaction to the silicone, which leads to eventual granuloma formation.

Granuloma formation is a common adverse effect of these procedures, with estimates ranging from 1 to 20%. These granulomas occur sometimes many years after the injections themselves, and the trigger for their formation is not understood.

Inflammation causes pain, and the aesthetic impact can be severe depending on the location, amount of migration, and extent of granuloma formation. Secondary infection of these granulomas is not uncommonly described in case reports.

Due to the migratory nature of the silicone, where many small particles are broadly dispersed over a large area, surgical resection is often not possible.

Non-surgical treatments include intralesional steroid injections of triamcinolone or betamethasone, which are limited to large nodules, or systemic immune-modulating agents such as 5-fluorouracil and TNF-alpha inhibitors.

Conclusion

Silicone granulomas are a challenging pathology to diagnose due to their similarities to more benign and self-resolving etiologies. Public awareness and improved regulation and prevention will be the keys to the elimination of these debilitating complications.