

# A woman with asymmetrical facial swelling

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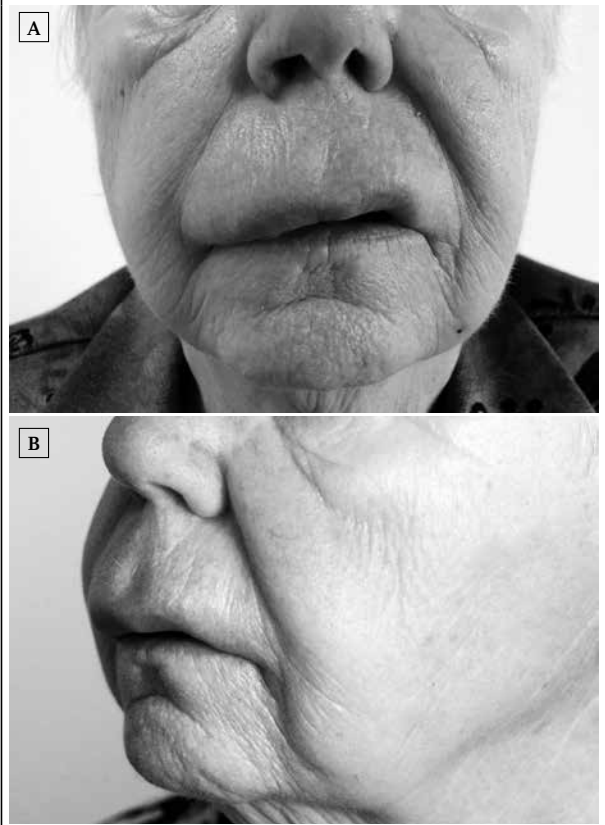
## CASE REPORT

A 69-year-old woman visited the Department of Dermatology because of a six-month history of persistent subcutaneous asymptomatic swelling of the upper lip and cheeks. The swelling did not seem to have a particular pattern of occurrence, particularly not after ingestion of food. There was no dyspnoea, rhinoconjunctivitis, fever or other symptoms. Her medical history included COPD and diabetes mellitus type II. Patient had already visited the Department of Otorhinolaryngology and Oral and Maxillofacial Surgery with the same complaint but unfortunately that did not lead to a diagnosis or therapy. Although initially denied, and only after persistent questioning, the patient later admitted she had had a cosmetic treatment nine years ago using silicone oil, a permanent filler. She was injected with 2.5 cc polydimethylsiloxane in the cheeks and upper lip. On physical examination, an asymmetrical swelling of the upper lip and a diffuse swelling of the cheeks was observed (*figure 1*). At these locations two firm nodules of 2-3 cm could be palpated. Photographs were taken with permission of the patient.

## WHAT IS YOUR DIAGNOSIS?

See page 288 for the answer to this photo quiz.

**Figure 1.** Pictures of the patient showing an asymmetrical swelling of the upper lip and swelling of the cheeks: frontal (A) and lateral (B) view. Photographs were taken and published with permission of the patient



## DIAGNOSIS

We suspected a granulomatous reaction caused by the silicone oil injected nine years earlier. A punch biopsy of the upper lip nodule was performed, and histopathological evaluation confirmed the diagnosis. It showed formation of granulomas and histiocytic giant cells with vacuoles, surrounded by a lymphohistiocytic infiltrate (*figure 2*).

Injectable fillers are increasingly used for cosmetic purposes. Over 150 injectable fillers are available worldwide. Fillers can be categorised as temporary, semi-permanent, or permanent, depending on the amount of time the substance remains in the injected area.<sup>1</sup> Although soft tissue fillers in general are considered safe, numerous studies have been published describing late adverse events. One of these rare late complications is the formation of foreign body granulomas, encapsulating the injected material. Incidence rates vary from 0.02-1%.<sup>2</sup> Many patients, however, are unable to recall which particular type of filler material was used.

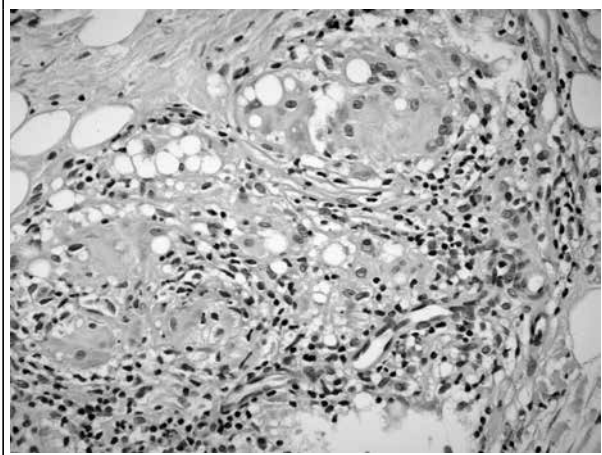
Foreign body granulomas usually appear 6-24 months after injection, although periods of up to ten years have been reported.<sup>3</sup> It often presents as a sudden onset of painless, firm nodules with local redness at the site of injection. The diagnosis is based on the clinical presentation and histological examination. The differential diagnosis should include angio-oedema, Melkersson-Rosenthal syndrome, cellulitis, allergic contact dermatitis, sarcoidosis and tuberculosis.

The exact pathogenesis of these foreign body granulomas, also described as silicone granulomas or siliconomas, is still unknown. The volume of the injected filler, the impurities of a filler substance or the injection technique have been suggested as causative factors. Trauma, drugs or infection may be possible triggers for this late complication.

Intralesional or systemic corticosteroids are usually the treatment of choice although often with only a temporary result. Minocycline has also been reported as a successful treatment. Surgical removal is often not feasible because complete removal of widely spread filler material will lead to unacceptable scarring.

Conclusion: filler-induced granulomatous reactions should be included in the differential diagnosis of facial swelling.

**Figure 2.** Histopathological findings included formation of granulomas and histiocytic giant cells with vacuoles, surrounded by a lymphohistiocytic infiltrate (haematoxylin-eosin, X200)



## REFERENCES

1. Carlos-Fabuel L, Marzal-Gamarra C, Martí-Álamo S, Mancheño-Franch A. Foreign body granulomatous reactions to cosmetic fillers. *J Clin Exp Dent.* 2012;4:e244-7.
2. Lemperle G, Gauthier-Hazan N, Wolters M, Eisemann-Klein M, Zimmermann U, Duffy DM. Foreign body granulomas after all injectable dermal fillers: part 1. Possible causes. *Plast Reconstr Surg.* 2009;123:1842-63.
3. Sanchis-Bielsa JM, Bagán JV, Poveda R, Salvador I. Foreign body granulomatous reactions to cosmetic fillers: a clinical study of 15 cases. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2009;108:237-41.