Correspondence

Primary cutaneous nodular amyloidosis associated with the injection of autologous fat

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Amyloidosis is the accumulation of amyloid-type proteins in various tissues. Primary localized cutaneous amyloidosis occurs when the amyloid is deposited only in the skin and there is no evidence of systemic involvement. In this group of amyloidoses there are three subcategories: macular, lichen and nodular amyloidosis.[1] Primary cutaneous nodular amyloidosis (PCNA) is the least frequent subtype. We present the case of a woman with a diagnosis of PCNA after a cosmetic procedure.

A 60-year-old woman presented with a 2-year history of a plaque on the right cheek that had been growing progressively, with associated pruritus. She stated that this lesion developed 6 months after a cosmetic procedure for facial rejuvenation, based on the injection of autologous fat. According to the patient, the procedure was performed on both cheeks, with a higher injection volume on the right cheek. No symptoms or lesions were described on the left cheek. She had no other relevant medical or surgical history.

On physical examination, two pink–orange plaques were seen on the patient's right cheek with no other findings (Fig. 1).

An incisional biopsy of the lesion was taken, and histological examination revealed the presence of amorphous eosinophilic material in the middle and deep dermis, accompanied by an infiltrate of perivascular plasma cells (Fig. 2a,b). The dermal deposits stained with Congo red and showed apple-green birefringence under polarized light (Fig. 2c,d). Immunohistochemical studies for kappa and lambda light chains showed evidence of kappa light-chain restriction, consistent with a monoclonal plasma cell proliferation (Fig. 2e,f).

Laboratory investigations, including full blood count, a comprehensive metabolic panel, electrophoresis of serum proteins and immunofixation of serum immunoglobulin light chains, were normal, as were electrocardiography results.

Based on the clinical, histological and laboratory findings, PCNA was diagnosed.

PCNA is a rare variant and there are few reports in the literature. The nodular subtype may present as one or several nodules or plaques.[1] It is characterized by a focal cutaneous accumulation of immunoglobulins, predominantly light chain, secondary to a localized proliferation of plasma cells. By definition, at the moment of diagnosis there should be no evidence of underlying haematological dyscrasia or any involvement of internal organs secondary to the amyloid deposit.[2]

The precise cause of these deposits is not clear: an association with autoimmune diseases such as Sjögren syndrome has been described, and there are reports of cases associated with trauma,[3] but none with cosmetic procedures as described here.

Currently, there is little evidence about the multiple modes of treatment reported in the literature. [4] Management options include surgical excision, dermabrasion, electrodessication and curettage, cryotherapy, carbon dioxide laser, pulse dye laser, intralesional steroids and cyclophosphamide.[5] Surgical removal should be the goal because of the potential infiltration in subcutaneous tissue and blood vessels and possible progression to systemic disease.[1]

This case shows a relationship between a cosmetic procedure based on the injection of autologous fat in the facial region and the development of PCNA in areas where the infiltration volume was higher. This suggests the possibility that local trauma or a persistent antigenic stimulus could be a potential trigger for the development of this pathology. More studies would be required to verify a causal relationship between this type of procedure and the development of PCNA.

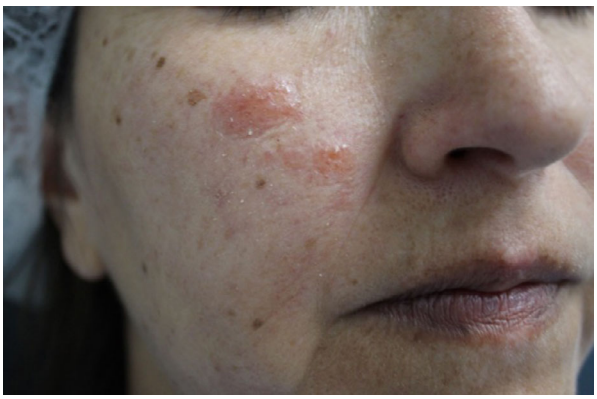

Figure 1 Two pink–orange plaques on the right cheek.

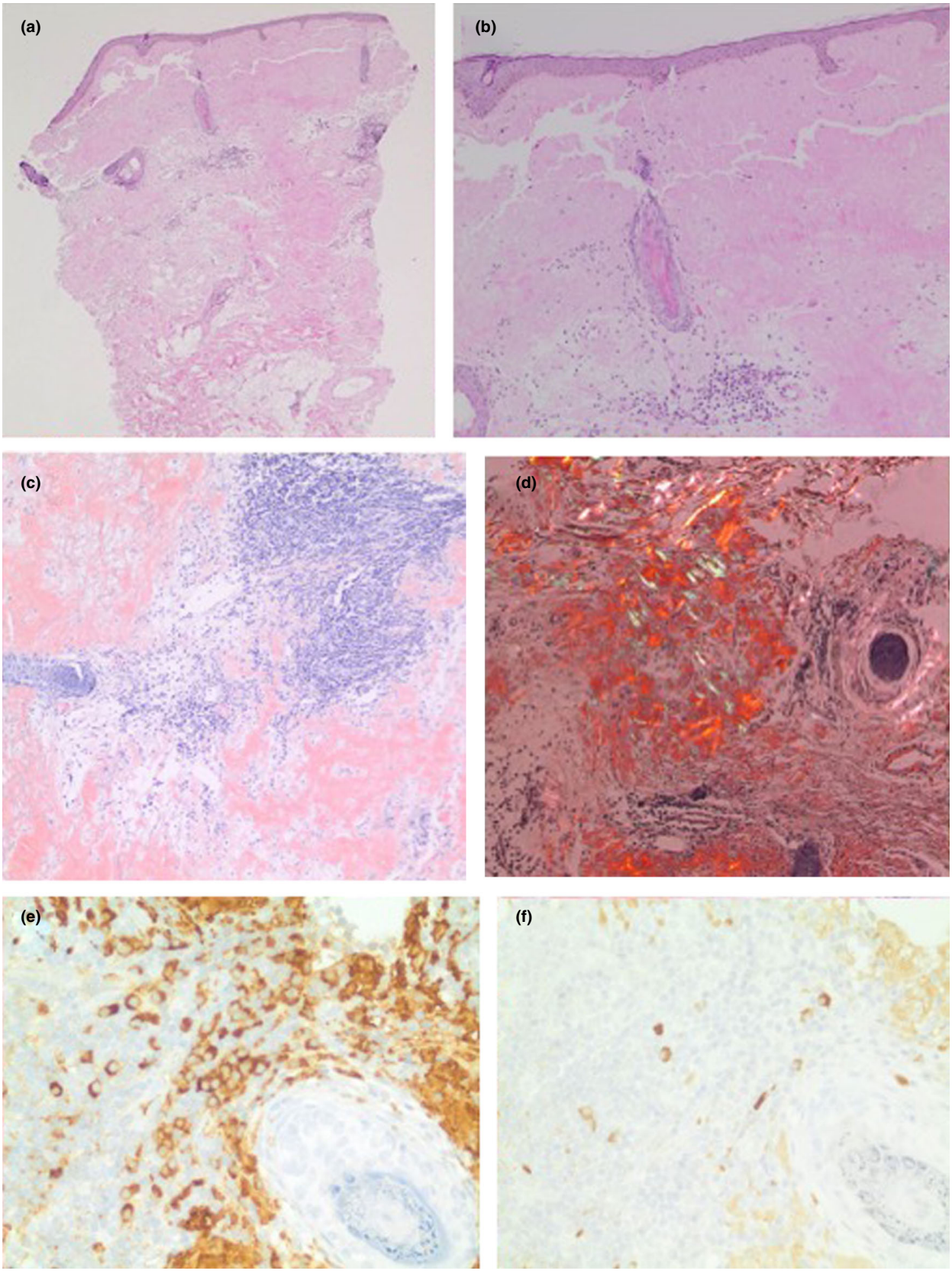

Figure 2 (a, b) Infiltrate of plasma cells, predominantly perivascular, with the presence of amorphous material in the middle and deep dermis. Haematoxylin and eosin original magnifications (a) × 40; (b) × 100. (c) Amorphous material intensely stained with Congo red (original magnification × 100). (d) Positive apple green birefringence under polarized light (original magnification × 100). (e, f) Immunohistochemical studies for (e) kappa and (f) lambda light chains showed evidence of kappa light-chain restriction, consistent with a monoclonal plasma cell proliferation. Original magnification (e, f) × 400.

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