



Late cutaneous B-cell pseudolymphoma after an upper-eyelid gold weight implant

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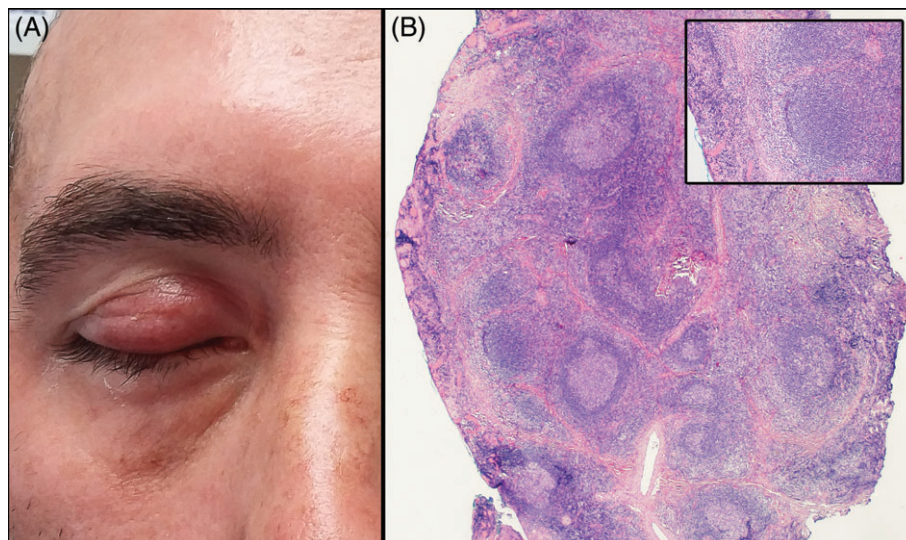


FIGURE 1 (A), Erythematous-oedematous plaque, with an underlying slightly indurated palpable lesion in the upper eyelid. (B), Skin biopsy specimen obtained from the upper eyelid stained with haematoxylin and eosin. Note hyperplastic lymphoid follicles, suggesting nodular lymphoid hyperplasia (right). (×4)

Upper-eyelid gold weight implants constitute an established tool in the symptomatic treatment of lagophthalmos, ie, the inability to close the eyes completely. Complications associated with this procedure are infrequent. When noted, non-infectious inflammatory reactions corresponding to type IV hypersensitivity reactions are resolved with the removal of the implant. Here, we report a case of a late B-cell cutaneous pseudolymphoma in a patient, 4 years after the removal of the weight, who showed extreme positive patch test reactions to gold sodium thiosulfate.

CASE REPORT

A 40-year-old-man was referred to the dermatology department after developing right upper-eyelid skin lesions. He had no previous skin diseases. Four years before, he underwent a gold weight insertion for the treatment of lagophthalmos. The patient presented with postoperative swelling, and, 6 months after surgery, the weight was finally removed, with complete clinical remission. He then consulted for persistent and progressive local inflammation for almost four weeks. Examination showed a 2.5-cm well-defined erythematous-oedematous plaque, with an underlying slightly indurated palpable lesion (Figure 1A). Excisional biopsy was performed, and histology showed follicular lymphoid hyperplasia with type B lymphocytic predominance (Figure 1B). Morphological and immune-histological markers for cutaneous B-cell lymphoma, including immunohistochemical detection of light chain restriction and polymerase chain reaction for clonal Ig rearrangements, were negative. Blood tests (serum protein electrophoresis, autoimmunity screening, immunoglobulins, and complement factors) gave normal results. Serology for *Borrelia burgdorferi* was negative. Patch tests with a baseline series (TRUE Test) and 2% gold sodium thiosulfate (GST) gave an extreme positive reaction to GST gold (+++) on day (D) 2 and D4, and these reactions persisted for almost four weeks. The patient began treatment with intralesional betamethasone, and we observed gradual regression of

the lesion. No exposures to cutaneous sensitizers (such as gold or gold-plated jewellery) were found, and he had never undergone previous dental restoration involving gold. He also denied ever having skin reactions to gold-containing products or other contact allergies.

DISCUSSION

To our knowledge, there are no previous reports of late cutaneous B-cell pseudolymphoma following an upper-eyelid gold weight implant for lagophthalmos.

Although complications following this procedure are uncommon, type IV hypersensitivity to gold may be a cause of chronic inflammatory reactions.¹ Most of the cases previously described in the literature as non-infectious inflammatory reactions after gold weight implant are mediated by this immune reaction, characterized by the existence of chronic type-T lymphocyte infiltration. The average time before onset of the symptoms was between 2 and 7 weeks,^{1–3} but it was several years in our case. All cases resolved after removal of the weight, and none of the cases developed pseudolymphomatous-like infiltration, as in our patient. Long-lasting patch test reactions to GST were not described in the reviewed studies; however, it is known that this type of reaction can be seen even in healthy people.⁴

Hypersensitivity reaction to metal implants is a process attributable to the degradation resulting from the permanent contact of the material with tissues. The corrosion process generates ionically active species that induce the immune system response.⁵ Kalimo et al showed how small gold particles appeared to bind persistently in the skin after intradermal tests, and accumulated in the macrophages of susceptible individuals, inducing pseudolymphoma formation.⁶ Two cases related to gold earrings have been reported so far.⁷ Although spontaneous regression has been described, a follow-up of at least 5 years is required to rule out the risk of cutaneous lymphomas. The specific risk of conversion of gold-related pseudolymphoma has not been studied.⁶

In conclusion, we report an exceptional case of late cutaneous B-cell pseudolymphoma occurring 4 years after the removal of an upper-eyelid gold weight implant in a patient with an extreme positive patch test reaction to gold sodium thiosulfate. The presence of foreign material may cause chronic inflammation that can be the stimulus for the development of a lymphoproliferative disorder; however, in our case, symptoms had initially disappeared following removal of the implant. We did not identify any other gold exposures. Pseudolymphomatous reactions have been previously described as contact reactions to gold, but have not so far been associated with eyelid gold weight implants.

CONFLICTS OF INTEREST

The authors have no conflicts of interest to report.

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