

Progressive supravenous granulomatous eruption in a HIV-infected woman. A manifestation of the immune reconstitution inflammatory syndrome

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Introduction

A wide spectrum of cutaneous manifestations has been reported to develop in intravenous drug users such as cutaneous infections, necrotizing ulcers, thrombophlebitis, false aneurisms or intraarterial injections, localized hyperpigmentation, scarring, granulomatous nodules or dermal sclerosis, between others.

The development of cutaneous nodules showing a dermal granulomatous inflammatory reaction is a well-known manifestation in intravenous drug users. However, the late development of multiple linear nodules several years after stopping the intravenous drug abuse, and coincident with the recovery of the immune response after highly active antiretroviral therapy (HAART) administration, has not been described before.

Case report



Figure 1: Nodules following superficial veins.

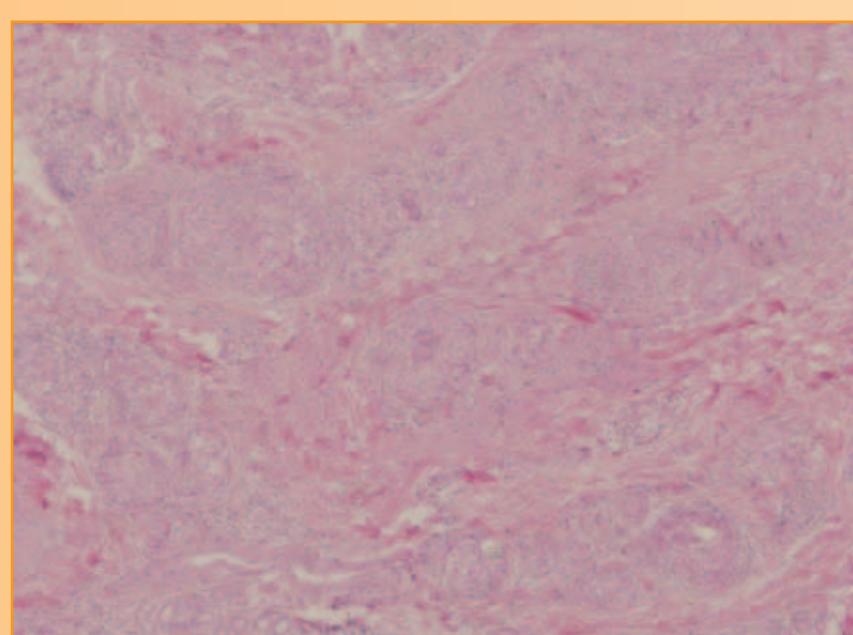


Figure 2: Hematoxilin-eosin, x40 showing sarcoid-like granulomas.

A HIV-infected woman with a previous history of endovenous drug abuse developed multiple linear nodules following the superficial veins on both arms (Fig 1).

Nodular lesions developed progressively after starting on HAART which increased her CD4 count and suppressed her viral load. She had quitted drug abuse 5 years before. Histopathological examination showed sarcoid-like granulomas (Fig 2).

Polarized microscopy disclosed birefringent crystals within the cytoplasm of some histiocytic cells (Fig 3).

X-ray spectrophotometry revealed their nature consisting on a mixture of glass, calcium, aluminium and silicon (Fig 4).

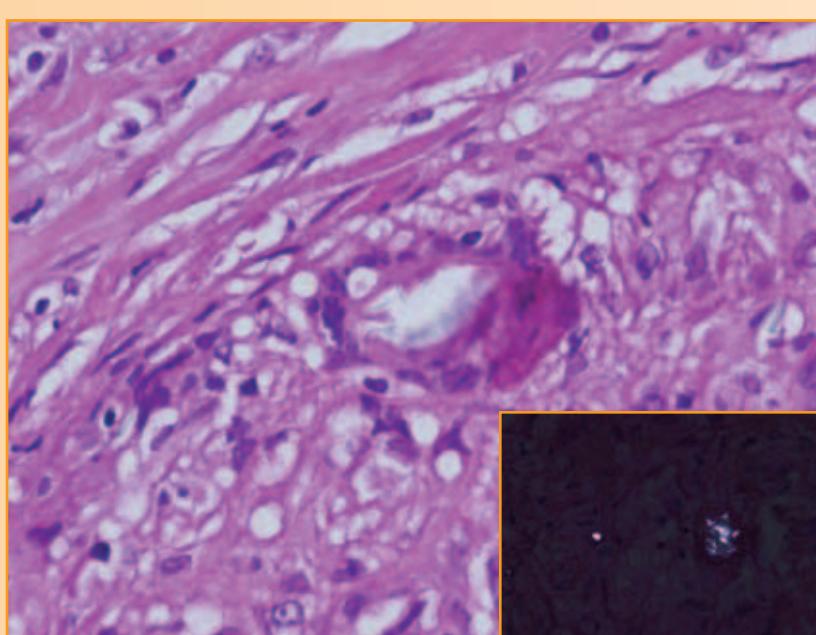


Figure 3: Under polarized light, a birefringent material could be detected.

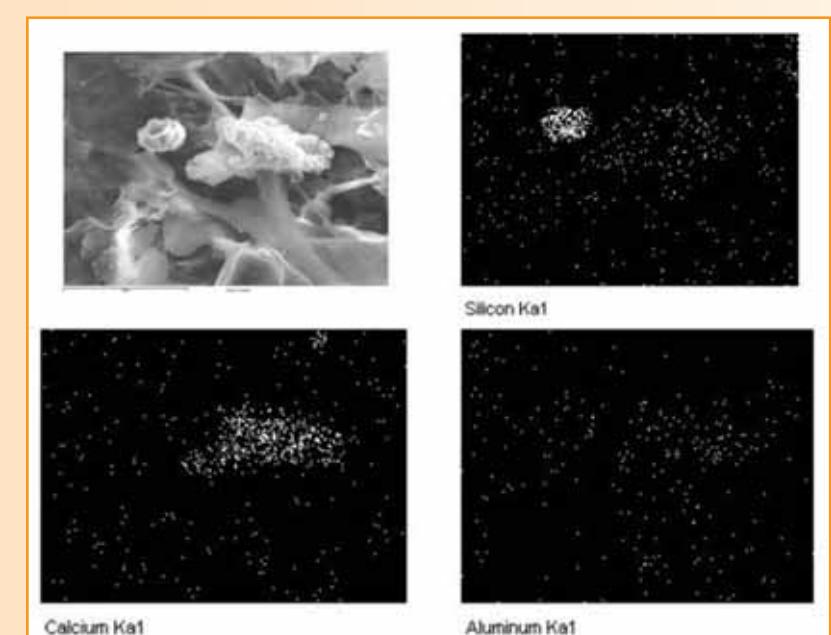


Figure 4: X-ray spectrophotometry showing silicon, aluminium and calcium in the structures.

Discussion

The immune restoration following HAART has lead to the resolution of many opportunistic infections, but has also been associated with the apparition of inflammatory or autoimmune diseases, when increasing CD4 counts. This phenomenon has been termed "immune reconstitution inflammatory syndrome (IRIS)" and a set of diagnostic criteria for this syndrome has been postulated (Table I). Our case fits these diagnostic criteria.

Our patient showed a granulomatous reaction to foreign material, probably coming from the syringes and adulterants of the drugs previously injected. This reaction had been quiescent until the immune system was prepared to respond to it and then the granulomatous reaction was started. Other cutaneous manifestations of IRIS have been described (Table II).

Table I. Immune reconstitution inflammatory syndrome (IRIS). Proposed diagnostic criteria (from Shelburne et al. 1999).

- 1.- The patient had a diagnosis of AIDS.
- 2.- Treatment with anti-HIV medicines had led to an increase in CD4+ T lymphocytes and a decrease in HIV-1 viral load if measured.
- 3.- Symptoms consistent with an infectious/inflammatory (autoimmune) condition appeared while on antiretroviral therapy.
- 4.- These symptoms could not be explained by a newly acquired infection, by the expected clinical course of a previously recognized infectious agents, or by side effects of therapy.

Table II: Cutaneous manifestations of IRIS:

- 1.- Viruses (herpes simplex, herpes zoster).
- 2.- Mycobacterial infections and Leprosy.
- 3.- Cryptococcosis.
- 4.- Eosinophilic folliculitis.
- 5.- Sarcoidosis.
- 6.- Granulomatous reactions to tattoos.
- 7.- Inflammation of warts and mollusca.
- 8.- Alopecia areata universalis.
- 9.- Lupus erythematosus: subacute, tumidus and systemic.

Conclusion

This case represents a peculiar manifestation of IRIS. It represents a foreign-body granulomatous reaction to material from adulterants and syringes used in drug abuse but only manifested after the immune system recovered.