

Nasal sarcoidosis: a cause for a medical rhinoplasty?

J VAN GRIETHUYSEN, R KUCHAI, A S TAGHI, H A SALEH

Otolaryngology, Head and Neck Surgery Department, Charing Cross Hospital, Imperial College London, UK

Abstract

Objective: We report the use of triamcinolone injections to correct severe nasal deformity due to sarcoidosis, as an alternative to formal surgical rhinoplasty.

Case report: A 30-year-old woman with a long-standing history of sarcoidosis presented to a tertiary referral rhinology clinic complaining of breathing difficulty and nasal deformity. Flexible nasoendoscopy revealed red nasal plaques typical of nasal sarcoidosis, together with significant widening of the nasal bridge. Triamcinolone, a long-acting corticosteroid, was injected both intralesionally and subcutaneously over the nasal dorsum, at zero, three and eight months, resulting in long-lasting improvement of the nasal shape.

Conclusion: Sarcoidosis is a non-caseating, granulomatous, epithelioid inflammation. Otorhinolaryngological manifestations occur in approximately 10 per cent of patients; however, there is little published experience of nasal reconstruction in such patients. We describe a quick, simple and relatively cost-effective technique, with little or no co-morbidity, with which to improve the aesthetic and symptomatic outcomes of nasal sarcoidosis.

Key words: Sarcoidosis; Corticosteroids; Injections, Intralesional; Nose

Introduction

Sarcoidosis is a disease of unknown aetiology first described in 1869. The disease most frequently affects young to middle-aged women and is characterised by non-caseating, epithelioid, granulomatous inflammation.¹ Diagnosis is usually aided by detection of an elevated angiotensin-converting enzyme level and visualisation of characteristic bilateral hilar enlargement on a chest radiograph. However, there is currently no diagnostic test, and sarcoidosis is thus often a diagnosis of exclusion.¹ The most common manifestation of sarcoidosis is pulmonary; however, cutaneous involvement occurs in up to 20 to 35 per cent of individuals with systemic sarcoid, and occasionally some patients present without any systemic disease.² Involvement and presentation varies with disease severity.

Otorhinolaryngological manifestations occur in approximately 10 per cent of patients diagnosed with sarcoid, but it is very rare for these to be the presenting feature.³ Nasal cutaneous presentations are uncommon, with only 0.3 to 4 per cent of sarcoid patients having this feature alone.⁴ Nasal sarcoid lesions usually comprise hardened, smooth, red (or sometimes violet) plaques.⁵ Patient symptoms range from polyps, through nasal congestion, rhinorrhoea and epistaxis,

to severe nasal deformity.³ Nasal complications may arise, such as nasal obstruction leading to septal perforation. There is very little published experience with nasal reconstruction for this disease entity. In general, a cautious, conservative attitude prevails out of fear of complications or failure.

We present the use of subcutaneous triamcinolone injections to treat severely evolving nasal deformity secondary to sarcoidosis.

Case report

A 30-year-old woman with a long-standing history of sarcoidosis, in addition to asthma, presented to a tertiary referral rhinology clinic complaining of breathing difficulty and nasal deformity.

Flexible nasoendoscopy revealed red nasal plaques typical of nasal sarcoidosis, together with significant widening of the nasal bridge.

This patient was treated with local steroid injections in the form of triamcinolone (Kenalog 40 mg/ml) injected both intralesionally and subcutaneously over the nasal dorsum; this was repeated three and eight months later. The patient was followed up two, six and 12 weeks after each injection. This treatment significantly improved the patient's breathing, and there was long-lasting improvement in the nasal shape

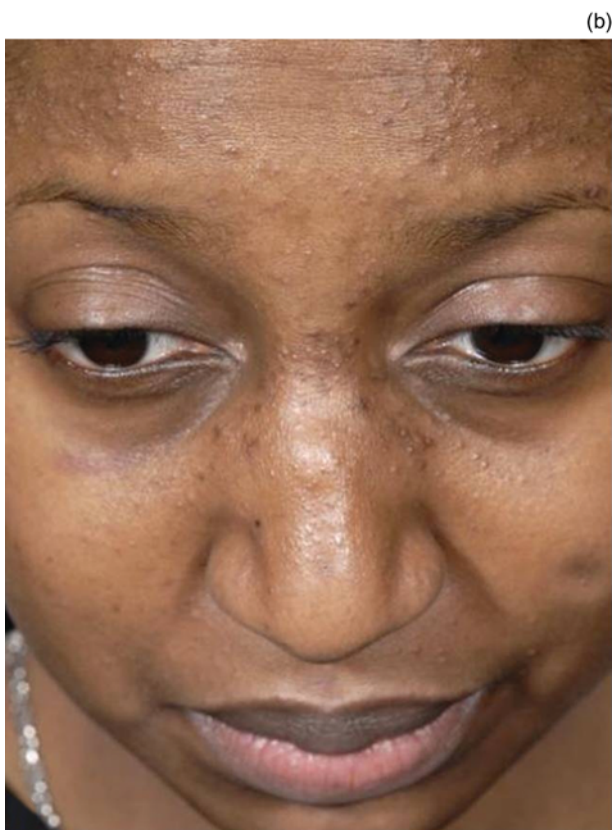
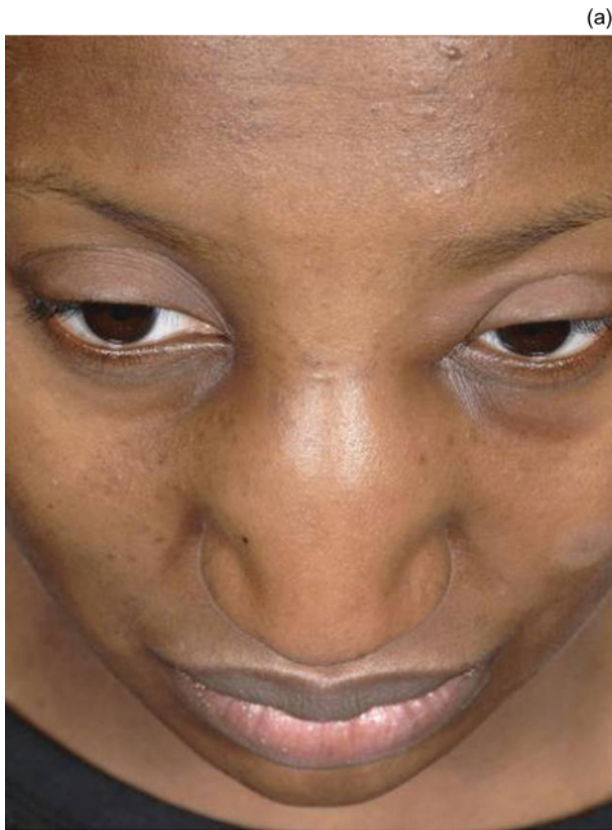


FIG. 1

Clinical photographs showing (a) pre-treatment and (b) post-treatment views, viewed from above. Published with patient's permission.

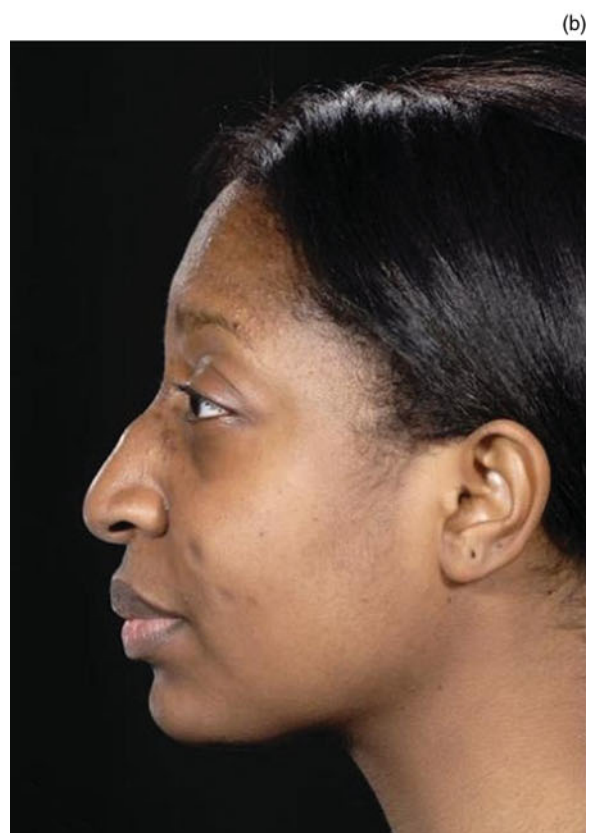


FIG. 2

Clinical photographs showing (a) pre-treatment and (b) post-treatment lateral views. Published with patient's permission.



FIG. 3

Clinical photographs showing (a) pre-treatment and (b) post-treatment oblique views. Published with patient's permission.

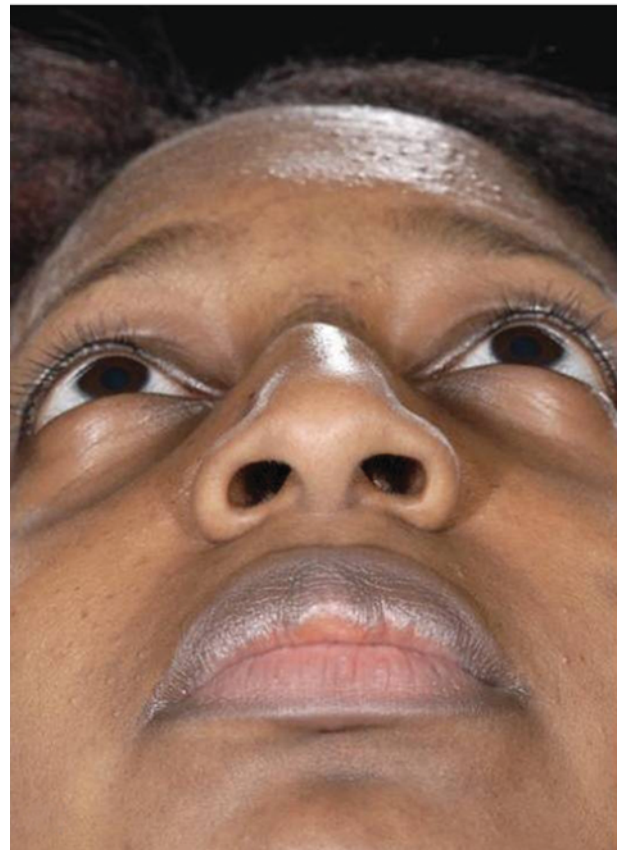
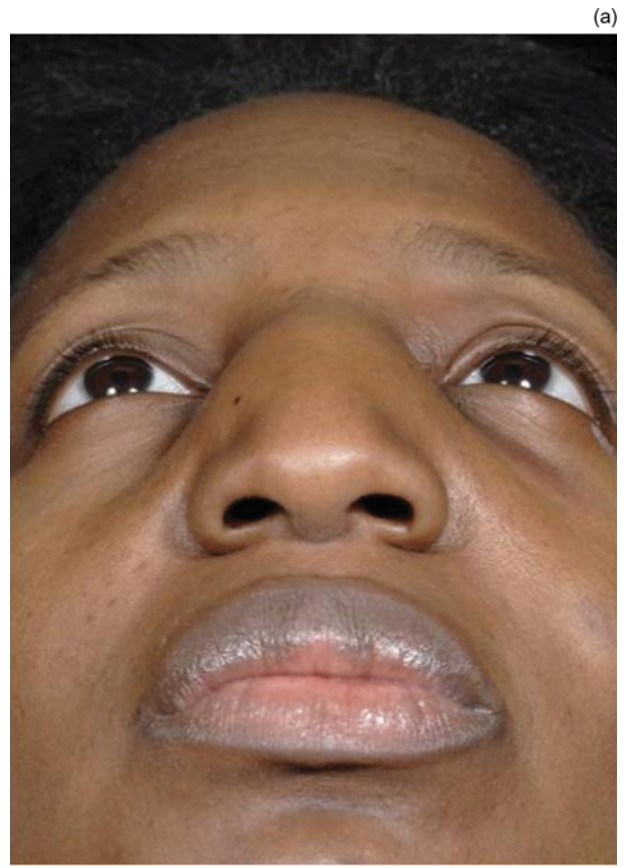


FIG. 4

Clinical photographs showing (a) pre-treatment and (b) post-treatment views, viewed from below. Published with patient's permission.

(Figures 1 to 4). It was acknowledged that further injections may be needed in the future.

Discussion

Sarcoidosis consists of epithelioid granulomas interspersed with lymphocytes. In patients with nasal manifestations, pre-intervention, unenhanced computed tomography reveals widespread nasal inflammation and an abnormal soft tissue mass. Nasal deformity induced by this condition is a result of the combined effect of cutaneous and mucosal disease.

- Sarcoidosis is characterised by non-caseating granulomas of unknown cause
- Manifestations are usually pulmonary, sometimes cutaneous and rarely nasal
- Nasal sarcoid can cause polyps, congestion, rhinorrhoea, epistaxis and nasal deformity
- Published treatments include systemic immunosuppressants and surgery (including laser)
- Triamcinolone injections successfully treated the presented case

Surgery has been shown to successfully treat individuals with nasal granulomatosis refractory to pharmacological treatment.⁶ However, problems with surgical treatment include the lack of satisfactory post-operative cosmesis and the risk of skin graft loss.

Laser has also been used for sarcoidosis treatment, with beneficial, long-lasting effects.^{7,8}

Pharmacological agents which are known to have measurable success in treating persistent, widespread sarcoidosis include allopurinol, infliximab, hydroxychloroquine, methotrexate and retinoids.^{1,9,10}

Triamcinolone is a long-acting, synthetic corticosteroid given orally, by injection (40 mg/ml, under local anaesthesia if needed), by inhalation, or as a topical ointment or cream.

Topical triamcinolone injections provide an alternative modality of management for chronic, evolving inflammatory conditions in patients in whom surgery is undesirable and systemic medical treatment has been unsuccessful. Patients should be followed up two, six and 12 weeks after injections. Further

application of this treatment may encourage its use as a long-term, conservative therapeutic option.

Conclusion

In the presented case, nasal sarcoidosis was treated with local triamcinolone injection, with a successful aesthetic and functional outcome. Treatment was quick, simple and relatively cost-effective, with little or no co-morbidity. In this case, an improvement in quality of life comparable to that following formal surgical rhinoplasty could be expected.

Acknowledgement

Many thanks to our patient who kindly consented to have her case published.

References

- 1 Newman LS, Rose CS, Maier LA. Sarcoidosis. *N Engl J Med* 1997;**336**:1224–34
- 2 Wilson NJ, King CM. Cutaneous sarcoidosis. *Postgrad Med J* 1998;**74**:649–52
- 3 Shah UK, White JA, Gooley JE, Hybels RL. Otolaryngologic manifestation of sarcoidosis: presentation and diagnosis. *Laryngoscope* 1997;**107**:67–75
- 4 Zeitlin JF, Tami TA, Burgman R, Winget D. Nasal and sinus manifestation of sarcoidosis. *Am J Rhinol* 2000;**14**:157–61
- 5 English JC, Patel PJ, Greer KE. Sarcoidosis. *J Am Acad Dermatol* 2001;**44**:725–43
- 6 Preminger BA, Hiltzik DH, Segal J, Morrison NG. An operative approach to the treatment of refractory cutaneous nasal sarcoid: a case report and review of the literature. *Ann Plast Surg* 2009;**63**:685–7
- 7 Baughman RP, Lower EE. Infliximab for refractory sarcoidosis. *Sarcoidosis Vasc Diffuse Lung Dis* 2001;**18**:70–4, 310
- 8 Carlesimo M, Giustini S, Rossi A, Bonaccorsi P, Calvieri S. Treatment of cutaneous and pulmonary sarcoidosis with thalidomide. *J Am Acad Dermatol* 1995;**32**:866–9
- 9 Young HS, Chalmers RJ, Griffiths CE, August PJ. CO₂ laser vaporization for disfiguring lupus pernio. *J Cosmet Laser Ther* 2002;**4**:87–90
- 10 O'Donoghue NB, Barlow RJ. Laser remodeling of nodular nasal lupus pernio. *Clin Exp Dermatol* 2006;**31**:27–9

Address for correspondence:

Dr Jennifer van Griethuysen,
Otolaryngology, Head and Neck Surgery Department,
Charing Cross Hospital,
Fulham Palace Road,
London W6 8RF, UK

E-mail: jmv04@imperial.ac.uk

Dr J van Griethuysen takes responsibility for the integrity of the content of the paper
Competing interests: None declared
