

## A Review of Cutaneous Granulomas and Lupus Vulgaris Following BCG Vaccination in a Skin Hospital in Singapore

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### Abstract

**Introduction:** Since the introduction of BCG vaccination in 1921, there have been numerous reports of cutaneous complications. Although common local effects such as erythema, soreness and local abscesses are well known, the incidence of cutaneous granulomas and BCG-induced lupus vulgaris is rare. **Patients and Methods:** This is a retrospective analysis of our local experience in dealing with cases of cutaneous granulomas following BCG vaccination. Cases were seen at a local tertiary level dermatological referral centre. **Results:** There were 14 cases seen over an 8-year period. Of these cases, 4 were clinically suggestive of BCG-induced lupus vulgaris, but only 1 of these cases was confirmed by culture. All but one of these cases had developed these complications after multiple BCG vaccinations. The 3 suspected but unconfirmed cases were treated with isoniazid. The 1 case of confirmed BCG-induced lupus vulgaris was treated with rifampicin and ethambutol, as sensitivity testing revealed resistance to isoniazid. All 4 cases responded well to treatment. The other 10 cases of vaccine-induced cutaneous granulomas responded to local symptomatic treatment. **Conclusions:** Although local effects such as induration and pustule formation at the injection site are not rare, the development of cutaneous granulomas is uncommon. Incidence of complications increases with multiple vaccinations. Cases usually respond to local symptomatic therapy, while more aggressive lesions responded to the use of oral isoniazid. Confirmed cases of BCG-induced lupus vulgaris should be treated based on antibiotic sensitivity profile.

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