Dystrophic calcification and infection of the hand after paraffin injection: A Case report

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Introduction

Paraffin is a mixture of purified, saturated hydrocarbon extracted from crude oil. Direct injection of liquid paraffin has been used for soft tissue augmentation. Most patients are initially asymptomatic after injection of paraffin. However, gradually, various complications including cellulitis, tissue necrosis, ulceration with sinus tracts, and foreign body granulomatous reaction develop. Paraffinoma is defined as a granulomatous foreign body reaction. Although there are several previous reports of the paraffinomas into various parts of the body, however paraffinomas in the hand area have rarely reported. Authors experienced a case of multiple dystrophic calcification of the hand after paraffin injection; therefore, we report this case and literature review with the treatments.

Case Report

85 year-old female patient visited our hospital complaining of whitish pus like discharge at dorsoulnar side of left hand since one week ago. (Fig. 1)

In the laboratory result, sign of infection, increased WBC, ESR CRP (WBC 8800/ul, ESR 59 mm/hr, CRP 16.63 mg/L), were observed. While other findings including Uric acid, Rheumatoid Factor remained normal. The patient had past history of illegal paraffin injection on the left hand 50 years ago for cosmetic effect by unlicensed medical-practitioner.

Paraffinoma may present with different features, from a painless mass to a destructive ulcer stimulating carcinoma. Paraffinoma may develop even decades after primary injections.

The patient has undergone irrigation and debridement, and large amount of white foreign bodies were seen intraoperatively, it was removed as much as possible. Wounds were primarily closed after debridement of the foreign bodies and necrotic tissue. (Fig. 4)

The biopsy showed fibrosis and necrosis with dystrophic calcification, Swiss cheese appearance suggesting paraffin deposition (H&E, 100X). Infection sign and wound were improved after the surgery (Fig. 5).

Discussion

Paraffinoma may present with different features, from a painless mass to a destructive ulcer stimulating carcinoma. Paraffinoma may develop even decades after primary injections.

In this case patient had history of illegal paraffin injection 50 years ago with multiple dystrophic calcification shown at radiograph, and was diagnosed by biopsy as paraffinoma.

There are many conditions such as TB, tumoral calcinosis, parasite infection, gout or degenerative change which may cause dystrophic calcification. Therefore, exact history taking is essential for differential diagnosis.

In this case, authors have obtained favorable result with removal of foreign body and primary closure of the wound. For treatment of Paraffinoma, removal of paraffinoma following primary closure is optimal and if unable, flap operation should be considered.