

# Comment On Dermoscopic Features of Seborrheic Keratoses Following Cryotherapy

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## ABSTRACT

Seborrheic keratosis (SK) is the most common benign tumor in older individuals. Freezing with liquid nitrogen has been widely used as a method of treatment. In one of our patients treated with cryotherapy, follow-up dermoscopic image of the lesion raised a concern for regressing malignant lesion in the post treatment period. Information on the dermoscopy of SK treated with cryotherapy was not available. Consequently, we gathered and retrospectively analysed the pictures taken during healing periods of four SK without choosing a specific type. Besides dermoscopic structures specific for SK, coarse and fine gray granules arranged in a linear or annular pattern were also noted. These features have been reported in various malignant tumors before. Most of the time, clinical diagnosis of SK is not an issue; although rarely though rare malignant transformation of SK has been reported. Furthermore, SK may be found with another malignant condition as a collision tumor. Consequently, we think all the dermoscopic features presented are compatible with cryotherapy induced lichenoid keratosis like lesions. As a conclusion, it is important to know and document the dermoscopic findings that occur in the post-cryotherapy healing period to prevent an impression of misdiagnosis or inadequate therapy.

**Key words:** seborrheic keratosis, dermoscopy, cryotherapy

## SEBOREİK KERATOZLARDA KRYOTERAPİDEN SONRA ORTAYA ÇIKAN DERMOSKOPIK BULGULAR ÜZERİNE BİR YORUM

### ÖZET

Seboreik keratoz (SK) erişkin yaş döneminde en sık görülen iyi huylu deri tümörüdür. Lezyonların tedavisinde sıvı nitrojen ile dondurma yaygın olarak kullanılmaktadır. Kriyoterapi uygulanan hastalarımızdan birisinin tedavi sonrası izlemi sırasında ortaya çıkan dermoskopik bulgular gerilemekte olan malin deri tümörü şüphesi uyandırmıştır. Kriyoterapi ile tedavi edilen SK'lı hastalarda izlenebilecek dermoskopik bulgular şimdye kadar bildirilmemiştir. Bu nedenle, tipine bakılmaksızın SK tanısı konan ve kriyoterapi uygulanan 4 hastada iyileşme safhasında çekilmiş dermoskopik fotoğraflar retrospektif olarak incelendi. Seboreik keratoz için özgün dermoskopik yapılara ek olarak gri renkli ince ve kalın granüller izlendi. Söz konusu ince granüller birleşerek bazı alanlarda lineer veya annüler yapılar oluşturuyordu. Bu özellikler daha önce çeşitli malin tümörler için tanımlanmıştır. Dermatolojik incelemede, SK'nın ayırıcı tanısı çoğunlukla sorun oluşturmasa da, çok nadiren malin dönüşüm bildirilmiştir. Ayrıca, SK kötü huylu tümörlerle kollizyon tümörü olarak yanyana bulunabilir. Sunulan gözlemsel değerlendirme kriyoterapinin likenoid keratoz benzeri değişikliklere neden olduğunu düşündürmüştür. Sonuç olarak SK'nın kriyoterapi sonrası iyileşme devresinde gösterdiği dermoskopik bulguların bilinmesinin ve belgelenmesinin, yanlış tanı ve yanlış tedavi izlenimini önlemek açısından çok önemli olduğunu düşünüyoruz.

**Anahtar sözcükler:** seboreik keratoz, dermoskopi, kriyoterapi

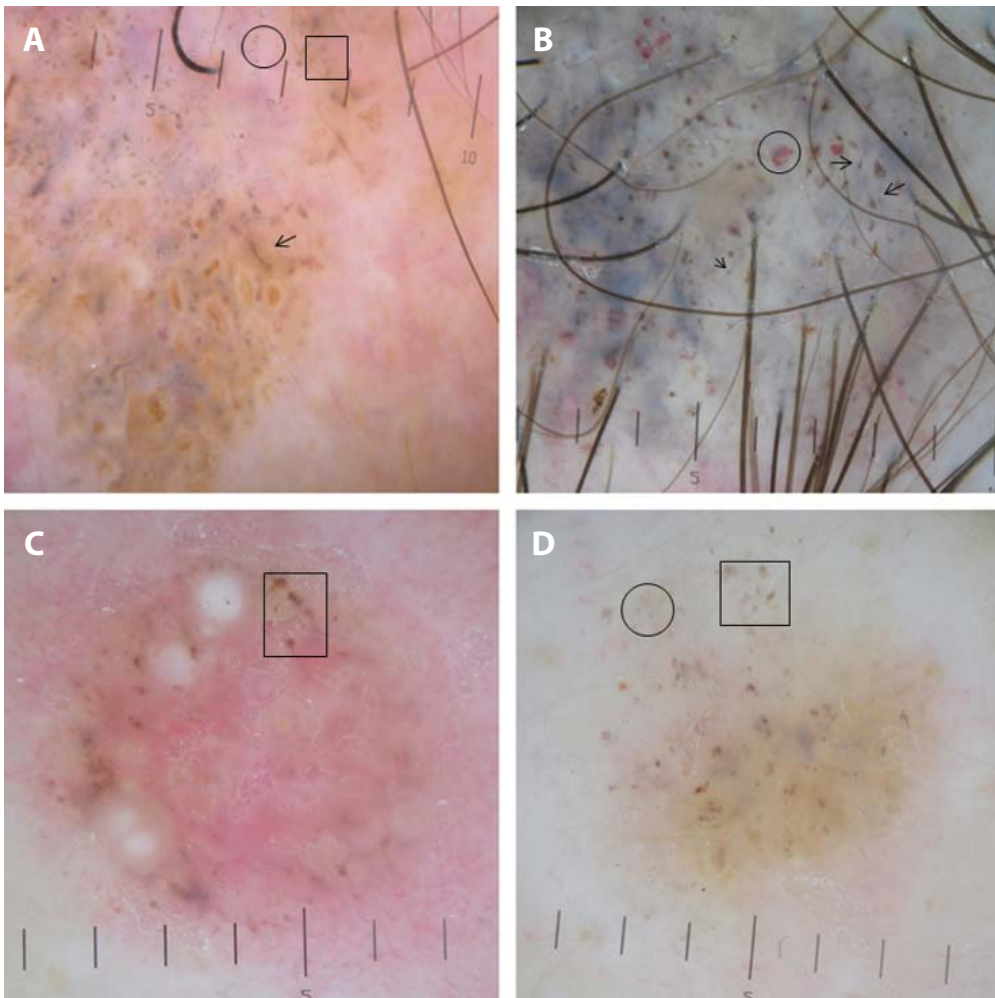
## Introduction

Seborrheic keratosis (SK) is a very common benign tumor usually appearing in the elderly. Except for a small percentage, they can be easily diagnosed clinically or with dermoscopy. Cryotherapy is a safe and effective method in the treatment of this entity, yielding satisfactory results

(1). Herein, we present four cases with SK which were treated with cryotherapy and document the dermoscopic changes observed during healing period.

## Cases

In case 1, discrete coarse granules, short straight or curved lines and fine granules all in gray color were noted. Certain granules were arranged in a linear or circular dotted fashion



**Figure 1.** Dermoscopic features of seborrheic keratoses following cryotherapy. **(A)** First case showing both coarse granules (*rectangle*) and fine granules (*circle*), short straight or curved lines. Some of the granules were arranged in a linear or circular dotted pattern (*arrows*). **(B)** Second case displaying tadpole granules (*arrow*) and red areas with pigmented dots (*circle*). **(C)** The third case presented coarse granules (*rectangle*) at the periphery of the lesion and around milium-like cysts. **(D)** Last case showing coarse granules (*rectangle*) and fine granules (*circle*) some of them in groups. A few scattered red areas.

resembling annular granular pattern. Brown, comedo-like openings at the periphery implied a SK (Figure 1a). In the second case, coarse granules some of which showing a tadpole appearance and red areas with pigmented dots inside were noteworthy (Figure 1b). The third case showed coarse granules at the periphery of the lesion and around milium-like cysts (Figure 1c). Tadpole granules and fine granules were also observed at different stages of healing. Finally, in the fourth case grouped coarse granules and fine granules in addition to the red areas and pigmented dots were observed (Figure 1d)

## Discussion

In our patients, the two most common dermoscopic findings were localized or diffuse granular pattern. It is known that fine granules represent either free pigment

incontinence or scattered melanophages in the papillary dermis, while coarse granules point out dense infiltrates of melanophages. These structures may be seen in melanocytic or non-melanocytic, benign or malignant lesions. Fine granules may indicate regressing melanocytic nevus, lentigo maligna or regressing melanoma. On the other hand coarse granules may be seen in basal cell carcinoma (BCC) and lichenoid keratosis (LK) (2-5). In malignant conditions, the regression structures are asymmetrical and multifocal; frequently dermoscopic features of the original lesion can also be seen. In case of LK which may be defined as a regressing lentigo or SK, localized or diffuse granular pattern associated with the specific signs of the original epidermal lesion is a well-known dermoscopic feature (2,3).

In the presented four cases, all the dermoscopic findings described so far correspond to a regressing lesion, particularly to LK. However fine granules were mainly a late stage constituent. In contrast to peppering seen in melanoma, in our patients the background was not hypopigmented but, yellowish-brown or pink. Short lines found in case 1 is a rare finding in LK. However, it has been reported to be present in 18.2% of the cases previously (2). In both cases 2 and 4 the red areas seen may be a sign of congestion after freezing. 'Tadpole granules' noticed in cases 2 and 3 are basically coarse granules that describe the clinical appearance perfectly. Although this new designation has not been used until now, similar appearance can also be discerned in the figures of Zaballos's articles relating with SK regressing to LK (2,3). The coarse granules with irregular borders present in our patients is different from the neat ovoid globules seen in BCC. The red round structures found in cases 2 and 4 have not been defined previously.

As can be expected, the process of regression disrupts the normal architecture of the lesion and effaces the diagnostic dermoscopic signs. At the latest stage of regression,

even if a biopsy is taken, diagnosis of the original lesion might not be possible. Lichenoid keratosis has already been defined as an immunologically mediated regression of an existing epidermal lesion mostly solar lentigines or SK. Both the lichenoid regression reaction and inflammation caused by freezing seem to cause similar dermoscopic changes in SK. It may be speculated that cryotherapy and ice crystal formation cause cell death and associated release of antigenic components may induce comparable immunologic reactions. However, it remains to be explained if frozen lesions also show LK histopathology. We hope these preliminary findings may be an onset for accumulating data on this subject.

## Conclusion

In conclusion, we think it is important to document and comment on the dermoscopic findings that occur in the post-cryotherapy healing period. Otherwise the post-treatment changes may alarm the clinician about misdiagnosing a tumor, which should have surgically excised instead of freezing.

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