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Case Report

Keloid Acne of the Neck Aggravated by Pregnancy in a Woman

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Abstract

Introduction: Keloid acne of the neck (KAN) is a dermatological pathology with very poorly explained etiopathogenesis and specific ethnic distributions; and almost always observed in black males. **Case history:** Miss N, 26 years old, came consulting for pruriginous scalp lesions, appearing intermittently over the last three years. These lesions first appeared during the first pregnancy, with an almost complete spontaneous regression after delivery 26 months before consultation. From the third month of the second (current) pregnancy, the patient noticed the aggravation of the lesions. The enabling factor in her past history was the habit she has of cutting her hair very low, and the current seven month pregnancy. On physical exam, she had android facial traits, hyperseborrhea, and polymorphous lesions associating

follicular papules, nodules and a few pustules. These lesions were predominant on the back of the neck, the occiput, and the vertex. Serum testosterone level was normal, but that of dehydroepiandrosterone (DHEA) was twice the normal blood level. **Discussion:** The striking feature in this clinical case was the chronic scarring folliculitis, normally observed in males, during pregnancy with a relapse in the next pregnancy, associated to DHEA level twice the normal blood level. This was reported in a 30 year old Nigerian at two months of amenorrhoea and in whom the aggravation of lesions was evident from the onset of pregnancy. These cases suggest the pathophysiological hypothesis of pregnancy related hormonal impregnation.

Keywords: Keloid acne of the neck; Dehydroepiandrosterone (DHEA); pregnancy.

Introduction

Keloid acne of the neck (KAN) is a chronic scarring folliculitis almost always observed in black people and predominantly among the males according to Kouame et al. (2009), Dinehart et al. (1989), Adegbidi et al. (2005) and Dinehart et al. (1989). A few rare cases have been observed in women by Dinehart et al. (1989), Ogunbiyi et al. (2005) and Defo et al. (2011). One exceptional case was observed recently in a white woman by Ali et al. (2011). The etiopathogenesis of KAN has not yet been fully understood, and no particular treatment regimen has been agreed upon. We hereby report a new case observed in a young pregnant woman.

Case History

In January 2011, Miss N, single, aged 26, came consulting for pruriginous skin eruptions made up of solid nuchal lesions progressing in peaks over the last three years. These lesions first appeared during the first pregnancy with spontaneous regression after delivery, 26 months ago from the day of consultation. For the past four months, the aggravation has been marked by a spread of lesions to the whole scalp. The only contributing factors in her past history were the habit she has of cutting her hair very low, and a current seven month normal pregnancy. The very low cut hair was a permanent practice with the patient since adolescence. Indeed, this practice is a rule in English speaking schools in Cameroon. The patient indicated recent aggravation of the eruptions from the third month of the current pregnancy, and this

was her consultation motive. The patient had very few lesions in between pregnancies, with complete regression sometimes; and she had never changed her hair cut style, either in between the pregnancies or during the different pregnancies. The patient had no history of treatment related to the lesions and was having her first consultation with the dermatologist.

On physical examination, we observed android facial traits and hyperseborrhea. On the scalp, the lesions were predominant on the back of the neck, the occiput and vertex. The lesions were polymorphous and made up of an association of multiple follicular papules and papulonodular lesions present alongside a few pustules. A few of these lesions were also present on the parietal regions of the head. On the back of the neck, there was a

tendency for the lesions to coalesce and form tumoral alopecic agglomerations (figure 1).

Please see figure 1 in the PDF version

On paraclinical work up, serum testosterone level was normal. However, serum dehydroepiandrosterone titres were 8900 ng/mL, twice the normal level.

The diagnosis of keloid acne was essentially clinical. We did not deem necessary to carry out a skin biopsy on these lesions; and more so in this part of the body prone to keloid among the blacks.

Discussion

KAN is a chronic scarring folliculitis, almost always observed in the black man according to Kouame et al. (2009), Dinehart et al. (1989), Adegbidi et al. (2005) and Dinehart et al. (1989), and rarely in the black woman reported by Dinehart et al. (1989), Ogunbiyi et al. (2005) and Defo et al. (2011). In this paper, we present a particular case of KAN recurrent and aggravated by subsequent pregnancies. In this 26 year old female, we observed increased serum levels of DHEA.

In Nigeria, Ogunbiyi et al. (2005) reported a similar case in a young Nigerian woman aged 30 who was two months pregnant, and in whom lesions were aggravated from the onset of pregnancy.

The aggravation of lesions in our patient came along in the third month of pregnancy. The Nigerian case and ours suggest the pathophysiological hypothesis of pregnancy related hormonal impregnation.

Also in our patient, we observed increased levels of serum DHEA, up to twice the normal values. In fact, the DHEA produced by the adrenal glands is a precursor for androgens such as testosterone according to Baulieu et al. (2000). Defo et al. (2011) had observed an increase in serum testosterone in an 18 year old Cameroonian female with android facial traits who was treated for KAN. These two cases reinforce the hypothesis that androgens have a role to play in the pathophysiology of KAN in its rare manifestations in females. However, this hypothesis

remains doubtful considering the small number of cases so far observed in women.

Our patient consulted only three years after the onset of lesions. This long period is enough to explain the constitution of tumoral lesions and the possible extension of lesions to regions other than the neck and the occiput. Adegbidi et al. (2005), over a period of 10 years, observed a mean time interval of 29 months between the onset of lesions of KAN and the first medical consultation.

As seen on figure 1, we noted that our patient had the habit of very low hair cut. This habit, which is more of a male trait, is now practised more often by women and is a risk factor to KAN as observed by other authors like Dinehart et al. (1989), Mahé (1999), Salami et al. (2007) and Khumalo et al. (2007). It is

important to note that Kouame et al. (2009) in Côte-d'Ivoire narrated the history of low hair cuts in 79% of men diagnosed with KAN.

Considering the limited number of cases described in the literature, the keloid acne of the neck found in our patient may have been the result of the combination of many factors namely: the low hair cut, the high DHEA level and the pregnancy.

Conclusion

Here we have reported a case of keloid acne of the neck in a young woman, recurrent with and aggravated by successive pregnancies, and associated with high serum levels of DHEA, precursor of testosterone.

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