Case Report

Management of benign florid Acanthosis Nigricans

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Abstract

A 35 year old male presented with extensive Pigmentation of the entire body with massive, hyperkeratotic plaques on the nape of neck and other body creases which was cosmetically unpleasant to the patient. A punch biopsy of the lesion over the neck revealed epidermis with hyper-keratosis and papillomatosis hyperplasia with increased pigment in the basal layer in accordance with the diagnosis of Acanthosis Nigricans. Further investigations such as Computed tomography of abdomen and Insulin resistance profile failed to reveal the cause of the extensive nature of the condition. Oral Acitretin was started for the patient improvement of skin lesions was seen. The large lesion over the nape of the neck however didn't show any improvement. It was excised and the area was grafted with normal split skin graft from the thigh. He went on to have an uneventful recovery of the grafted area on the neck. Treatment of Acanthosis nigricans remains a challenge

Keywords: florid acanthosis nigricans.

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INTRODUCTION

Acanthosis nigricans is a skin condition characterized by areas of dark, velvety discoloration in body folds {^1} and creases. The affected skin can become thickened. Most often, acanthosis nigricans affects the armpits, groin and neck it us usually seen in obesity and diabetics in benign cases or associated with tumour products having insulin-like activity or tumour necrosis factor in malignant type. Acanthosis Nigricans is usually seen in the following types(Table 1){^2}. People with acanthosis nigricans should be screened for diabetes and, although rare, cancer. Controlling blood glucose levels through exercise and diet often improves symptoms. In case of debilitating cosmetically unpleasant nature of the extent of the condition, excision with Split thickness skin grafting can be a feasible solution.

CASE REPORT

A 35 year old male was seen in the dermatology department with complaints of extensive hyperkeratotic plaques with hyperpigmentation over Upper trunk, bilateral, upper limb, lower limb, face, nape of neck and similar smaller lesions in other creases of the body. He also complained of Tripe palms {^2}, (hyperkeratotic plaques of palms usually associated with acanthosis nigricans). He first noticed the discoloration about 8 years back on the nape of the neck, which slowly but steadily progressed to involve the entire upper body including his face and hands. He developed a velvety irregular growth over his neck causing cosmetic unpleasantness and a withdrawn personality. A late presentation and a non involvement of any other relatives ruled out a familial cause for the condition. He worked in the mines which included being in contact with gun powder. There is no history of diabetes. Local Examination presented a thickened velvety irregular hyperpigmented papillomatous growth over the nape{^3} of the neck measuring 15cm x 30cm. The lesion was non tender, non pulsatile, and normal in temperature with no discharging sinuses.

RESULTS

A biopsy of the lesion over the neck revealed epidermis with hyper-keratosis and papillomatosis hyperplasia with

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increased pigment in the basal layer. The dermis had fibrocollagenous stroma, dilated capillaries and only superficial perivascular lymphocytic infiltrate. All these findings were in accordance with Acanthosis nigricans{4. He was further investigated with a Computed tomography with iv and oral contrast of the abdomen and Chest did not reveal any abnormality of the pancreas and did not show any other tumours causing a surge in insulin like activity or tumour necrosis factor. Tumour Markers such as Carcinoembryonic antigen (CEA) and Prostate Specific Antigen (PSA) were within normal limits. Routine blood investigations such as Complete blood counts, Renal Function tests, Liver Function tests, Lipid Profile and fasting and post meal Blood sugar levels were all within normal range. Special investigations such as Homeostatic model assessment (HOMA) and Insulin resistance profile were within normal level too.

DIFFERENTIAL DIAGNOSIS

1. Epidermolytic Hyperkeratosis
2. Epidermal Nevus {^4)

TREATMENT

Patient was started on oral acitretin at 25/kg/day. There was improvement of skin lesion but The mass on neck failed to respond. He was evaluated for anaesthesia and along with a bleeding profile, which was normal. He underwent an excision of the mass over the neck. Intra operatively it was found to be superficial to the platysma muscle with no deeper involvement. Though the skin showed high vascularity, the entire lesion could be removed in totto with a clear receipient bed for split thickness skin grafting.

OUTCOME AND FOLLOW-UP

Patient had an un-eventful recovery with a few small patches of graft loss. He underwent regular dressing for the same till the wound was completely healed. He was advised to apply a neck extension brace to avoid contractures of the grafted skin. Patient was highly satisfied with the outcome. The Graft settled well with no contractures and full range of movements. The patient followed up for 3 months and later was lost to follow up as the patient was an overseas patient.

Figure 1

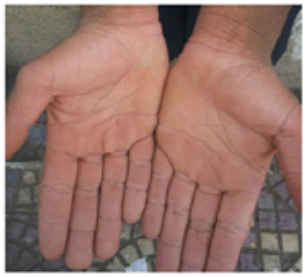

Figure 2

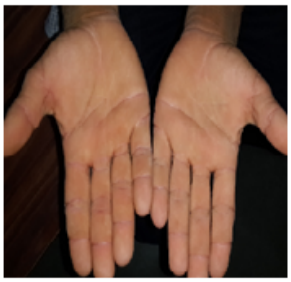

Figure 3

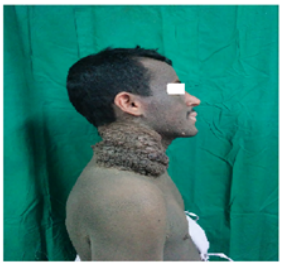

Figure 4

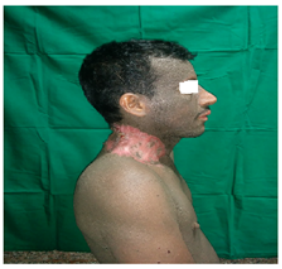

Figure 5

Legend

Figure 1: hyperkeratotis plaques over upper trunk with exaccerbation over flexures

Figure 2 AND 3: Tripe palms pre and post treatment

Figure 4: Pre opp

Figure 5: post-opp with improvement of skin lesions

Table 1: Causes of Acanthosis Nigricans^3

Type I	Familial
Type II	Endocrine
Type III	Obesity and Pseudoacanthosis nigricans
Type IV	Drug Related
Type V	Malignancy
Other	Acral Acanthotic Anamoly

DISCUSSION

Although Acanthosis Nigricans shows a very common occurrence amongst diabetics and obese individuals, the lesions are usually limited to mild amount of pigmentation and skin thickening around the neck and other creases of the body. It is usually diagnosed

clinically, though a skin biopsy is seldom required to confirm the diagnosis. If no clear cause is identified, it is necessary to search for one. Investigations such as Computed tomography of the abdomen may identify and lesion in the pancreas or any other insulin secreting tumours. Tumour markers such as Carcinoembryonic antigen (CEA) and Prostate Specific Antigen (PSA) may be of use in identifying tumours that cause a surge in insulin levels. The Management of Acanthosis Nigricans: The lesions are likely to improve if the known cause is removed. For example, Weight loss in obese, drug-induced acanthosis nigricans is likely to resolve when the drug is ceased, malignancy-associated variants may fade after a malignancy is removed. Controlling blood glucose levels through exercise and diet often improves symptoms. In conclusion, in cases of florid benign Acanthosis nigrican, oral acitretin gives good results. acitretin is known to act via normalising keratinocyte turnover rate and should be used in cases of florid acanthosis nigricans without an underlying cause, Surgical excision of unsightly lesion should be offered as a line of management for better outcome and patient satisfaction.

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