Brief Report

Extrafacial Melasma: A Scenario Less Explored

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Abstract

Background: Extrafacial melasma is a rare presentation, commonly occurring in postmenopausal women with a poor etiological insight and nature of its course. We planned to decipher the natural course of extrafacial melasma based on history questionnaire. **Materials and Methods:** Patients with diagnosis of extrafacial melasma were recruited. After informed consent, complete history including age of onset, duration, progression, sites of involvement (initial site as well as current site of pigmentation), treatment history, history of drug intake, family history, associated other diseases, and clinical photography and dermoscopy were done. **Results:** Fifteen extrafacial melasma patients were recruited. All were females with mean age of 51.2 years. History of facial melasma in past was given by 93% of recruited patients. Mean total duration of melasma was 23 years. Ten (66%) patients had centrofacial melasma to begin with, 4 (26%) patients had malar melasma, and 1 (6.6%) had extrafacial melasma as initial presentation. Currently all patients had extrafacial melasma. Mean time for clearance of central face melasma was 18.2 years and appearance of melasma at extrafacial sites was 20 years. **Conclusions:** We infer that different clinical patterns of melasma occur sequentially over the natural course of disease and centrofacial melasma as the initial presentation in majority of our patients, progressed to involve extrafacial sites with time.

Keywords: *Dermoscopy, extrafacial melasma, melasma*

Introduction

Melasma is a common dermatosis, which predominantly affects females and has an elusive etiology. Reported patterns of facial melasma include malar, centrofacial, and mandibular. Extrafacial melasma is the term given to melasma at non-facial body parts including neck, sternum, and upper limbs. Extrafacial melasma is a rare entity, whose pathogenicity is poorly understood. Multiple etiologies including sun light exposure, hormonal influences, and family history have been implicated. Clinically, extrafacial melasma is similar to facial melasma and presents as brownish hyperpigmented patches with irregular borders. Facial melasma occurs in age group of 20--40 years and is rare in postmenopausal woman, while extrafacial melasma occurs in postmenopausal women in fifth decade of life.[1] There is limited knowledge about the natural course of melasma. We hypothesize that in due course of natural history of melasma, there is subsidence of disease at primary facial sites and occurrence at the secondary sites which is termed as extra-facial melasma.

This study was planned to decipher the natural course of extrafacial melasma based on history questionnaire and dermoscopic features.

Methods

This study was carried out in department of dermatology, PGIMER Chandigarh. Patients attending pigmentary clinic with diagnosis of extrafacial melasma were included in the study. Exclusion criteria included patients with history of preexisting dermatosis or post-inflammatory hyperpigmentation, pregnant and lactating females, patients with history of photosensitivity or those taking photosensitizing medications. Informed consent was taken from all the patients. Complete history including age of onset, duration, progression, sites of involvement (initial site as well as current site of pigmentation), treatment history, history of drug intake, family history, associated other diseases, and clinical photography and dermoscopy was done. Diagnosis

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was confirmed clinically by two clinical experts and by histopathologic examination in doubtful cases. Acquired brachial cutaneous dyschromatosis (ABCD) was differentiated by presence of hyperpigmented macules mingled with hypopigmented atrophic macules in ABCD. Differentiation from post-inflammatory hyperpigmentation was done on the basis of absence of history of any preexisting dermatosis.

Results

A total of 15 patients of extrafacial melasma were recruited. All patients were females with mean age of 51.2 years. History of facial melasma in past was given by 14 out of 15 (93%) recruited patients. Mean age of onset of facial melasma in these patients was 27 years. Mean total duration of melasma was 23 years. Ten (66%) patients had centrofacial melasma to begin with, while 4 (26%) patients had malar melasma and 1 (6.6%) had extrafacial melasma as initial presentation. Currently all patients had extrafacial melasma, 12 (80%) patients had coexisting mandibular melasma and none had centrofacial or malar melasma [Figures 1 and 2]. Most of our patients had centrofacial/malar melasma to start with which progressed to involve mandibular area which later on involved neck and forearms along with clearance of melasma from central face. Eight (53%) patients had onset of melasma during pregnancy. All patients had taken treatment in form of topical and oral medications. Mean time for clearance of central face melasma was 18.2 years and appearance of melasma at extrafacial sites was 20 years, which means that time interval between appearance of melasma on face and extrafacial sites is 20 years. Two patients had history of OCP intake. Two patients had coexisting diabetes and one had hypertension. Family history of melasma was seen in 8 (53%) patients.

Dermoscopy was done at extrafacial site in 10 patients, which revealed diffuse brown pigmentation (10 patients), exaggerated pigment network (10 patients), brown dots and globules (4 patients), islands of spared skin at margins (10 patients), dark brown arcuate and annular patterns (5 patients), phylloid like seborrheic keratosis (2 patients), and white linear streaks and criss-cross pattern (3 patients) Figures 1 and 2 [Table 1].

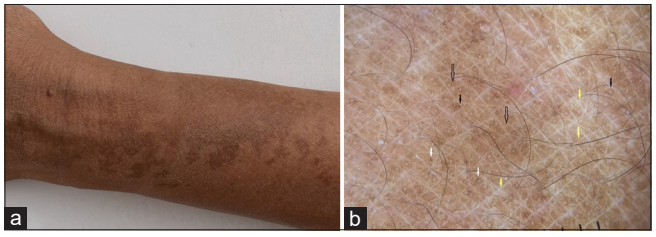

Figure 1: (a) Melasma over forearms. (b) Dermatoscopic examination (Dermlite DL 200, polarised mode) showing diffuse brown pigmentation along with exaggerated pigment network (hollow black arrow), brown dots (white arrow), linear white streaks and criss-cross pattern (yellow arrow) and ring like and arcuate structures (solid black arrow)

Discussion

Melasma is a common pigmentary dermatosis affecting the face. It predominantly affects females of skin phototype IV and V with the prevalence varying from 0.25% to 4% of patients attending dermatology OPD.[2] Etiology of melasma is poorly understood. Various factors implicated are sunlight, hormonal drugs, genetic predisposition, pregnancy, thyroid dysfunction, cosmetics, phototoxic and antiseizure drugs.[3] Extrafacial melasma is a rare subtype of melasma.

Clinically facial and extrafacial melasma share same features, represented by multiple irregular brown patches present in symmetric distribution. Among facial melasma, three patterns are seen viz. centrofacial, malar, and mandibular. Among extrafacial sites, neck, sternum, and forearms are involved. Histologically, there is increased basal layer pigmentation, epidermal atrophy along with solar elastosis. These histopathologic features are also shared by both facial and extrafacial type of melasma. Dermoscopic features of facial melasma include diffuse brown pigmentation, pseudoreticular network, brown dots and globules, arcuate and annular structures, sparing of follicular openings and presence of telengiectasias.[4] We observed similar dermoscopic features in extrafacial melasma along with linear streaks and criss-cross pattern over forearms and presence of seborrheic keratosis. Linear streaks signify presence of photodamaged skin.

A close differential of extrafacial melasma over forearms is acquired brachial cutaneous dyschromatosis (ABCD) which is characterised by bilaterally symmetric brownish

Table 1: Dermoscopic features of extrafacial melasma

Dermoscopic Features	No of patients
Diffuse brown pigmentation	10
Streaks and criss cross pattern	3
Exaggerated pigment network	10
Phylloid leaf like seborrheic keratosis	2
Islands of spared skin at margins	10
Dark brown arcuate and annular patterns	5
Brown dots and globules	4

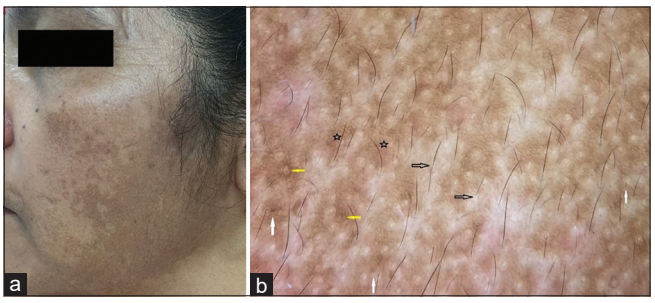

Figure 2: (a) Melasma over face (mandibular area). (b) Dermatoscopic examination (Dermlite DL 200, polarised mode) showing diffuse brown pigmentation with areas of exaggerated pigment network (black star), brown dots and globules (white arrow), arcuate structures (yellow arrow) and sparing of perifollicular area (black arrow)

irregular pigmentation over extensor aspect of forearm along with interspersed atrophic hypopigmented macules in post-menopausal women. ABCD is associated with poikiloderma of civatte in 45% of cases. Both ABCD and extrafacial melasma share similar histopathological features.[5] Clinical differentiating point between ABCD and extrafacial melasma is presence of atrophic hypopigmented macules in ABCD which are not there in extrafacial melasma of forearms. It might be possible that both these entities are same with ABCD likely a more advanced presentation of extrafacial melasma as atrophic macular lesions in ABCD are a sequel of photodamage and extrafacial melasma also is a photodamage induced disorder.

Facial melasma predominantly occurs in age group of 20--40 years with mean age of 33 years.[5] In our study, we found mean age of onset of facial melasma as 27 years. Extrafacial melasma is seen in 5th decade of life in perimenopausal women which is same as that observed in our study.[5] Extrafacial melasma is rarely seen in early age group. In our study, we did not find any male patient, although facial melasma is not uncommon in males.

We infer from our observation that these clinical patterns are seen as a natural course of disease occurring one after another. We observed that facial melasma is initial presentation which over time progress to involve extrafacial sites. Common initial site observed is centrofacial followed by malar, followed by mandibular and extrafacial sites. We also infer that centrofacial melasma clears with time and progressively involve mandibular area and extrafacial sites. It takes an average of 18.2 years for centrofacial melasma to subside and occur at secondary sites according to our observation. The natural course of involvement of sunexposed sites might differ in time in same patient as forearms are relatively sunprotected sites as compared to face so sun induced changes take time to occur at those sites. Another reason for clearance may be constant use of sunscreens and depigmenting agents for facial pigmentation.

Limitations of our study was small sample size, dermoscopy could not be in all patients and lack of severity scoring in our patients.

Our preliminary study raises a lots of questions about natural course of a rare disease. Future research with long term study is required for these unanswered questions.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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