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AN EARLY PRESENTATION OF LICHEN PLANUS PIGMENTOSUS: A CLINICOPATHOLOGICAL AND DERMOSCOPIC STUDY

Dermatology

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ABSTRACT

Lichen planus pigmentosus is a distinct clinical entity commonly seen in Indian population. It is variant of lichen planus usually seen in adult age group. Here, a 7 year old boy presented with asymptomatic hyperpigmented macules since he was of 3 years of age. This is an unusual presentation and cases have hardly reported at this age.

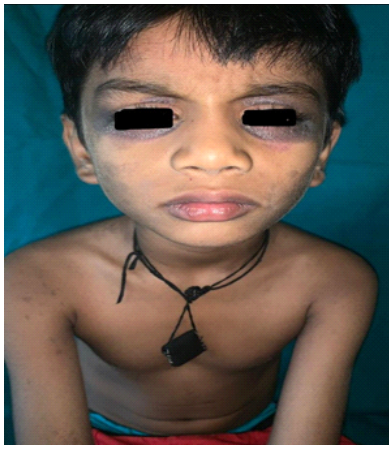
KEYWORDS

lichen planus pigmentosus, paediatric age group, unusal presentation.

Introduction:
Lichen planus pigmentosus is a variant of lichen planus which was first described by Bhutani in 1974. It is a frequently seen is in Indian population, with distinctive clinical and histological charecteristics. It presents as persistent and asymptomatic slate-grey pigmentation in darker individuals, and can also rarely present as macular hyperpimentation in lighter individuals involving mainly face, neck, and upper limb although it may be more widespread. It generally starts from third or fourth decade of life. Here is a case where the lesion started from 3 years of age.

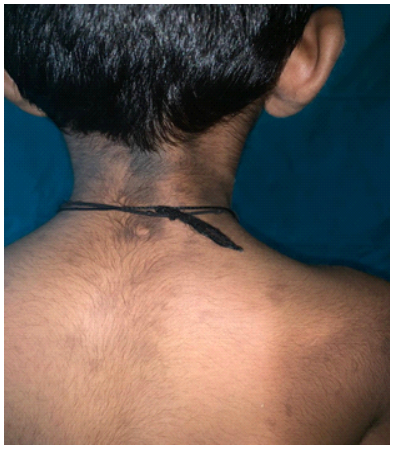
Case report:
Here is a 7 year old, male patient presenting to opd with complaints of asymptomatic lesions initially noticed over neck when he was of 3 year old, and then over back, both upper limb and over face mainly over peri orbital region. Which were initially small in size and gradually progresssed to present size. With no history of similar complaints in family and no history of atopy in child.

On examination, they were found to be brown to black colored macules and patches over nape of neck extending towards lateral side of neck, diffusely over upper back, both upper arms, around peri orbital region with dryness of skin remarkably noted over peri orbital region compared to patches over other region.(figure 1,figure 2). Palms, soles, hair, nail, mucosa were normal. Darier's sign was negative. Ophthalmic and systemic examination was normal. Hematological examination included complete hemogram, ESR, LFT, serum cortisol, serum vitamin B12 which were within normal limits and was negative for hepatitis c. Furthur incisional biopsy was done from lesion over neck.



Hyperpigmented macules seen over both upper arms, around peri orbital region with dryness of skin remarkably noted over peri orbital region

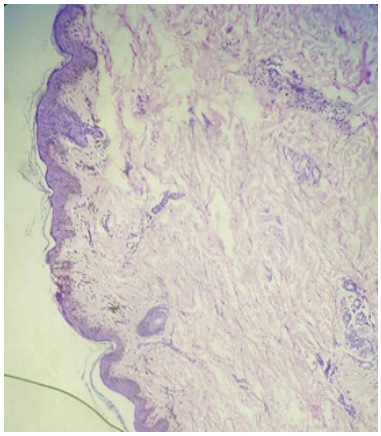
Figure 2:



Brown to black colored hperpigmented macules and patches seen over nape of neck extending towards lateral side of neck and diffusely scatered over upper back.

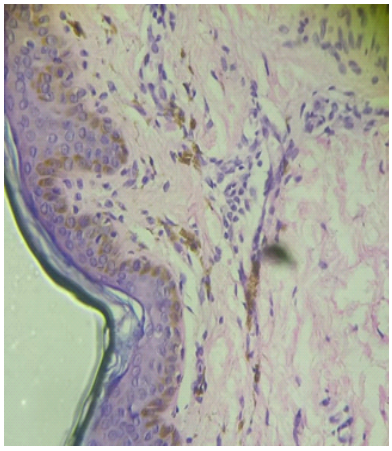
And Histopathology report showed epidermis with basal pigmentation. Dermis shows melanophages with pigment. No basal vacuolar or band like dermal infilterate of lymphocytes. No perivascular infilterate.(figure 3,figure 4)

Figure 3:



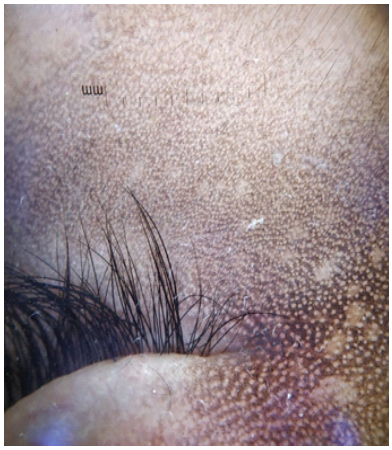
Histopathology report showed epidermis with basal pigmentation. Dermis shows melanophages with pigment. No basal vacuolar or band like dermal infilterate of lymphocytes. No perivascular infilterate, 10X, H and E stain

Figure 4:



Histopathology, epidermis with basal pigmentation. Dermis shows melanophages with pigment seen prominently. 40X, H and E stai Dermoscopy was done under non polarized light under 10x magnification which showed diffuse dark brown globules indicating epidermal pigmentation. And grayish dotts indicating dermal melanophages. (figure 5)

Figure 5:



Dermoscopy done under non polarized light with10x magnification which showed diffuse dark brown globules indicating epidermal pigmentation. And grayish dotts indicating dermal melanophage And patient was given vitamin A supplements along with topical tacrolimus 0.03% ointment with not much improvement.

The clinical picture of multiple asymptomatic hyperpigmented macules coupled with histopathological finding of epidermis with basal pigmentation and dermal melanophages with pigment rules out other differentials like urticaria pigmentosa, idiopathic eruptive macular pigmentation, fixed drug eruption.

Discussion:

LPP is a chronic hyperpigmentary disorder runs a prolonged and insidious course and has unknown etiology. Cases from are reported mainly from India, Japan, Korea, Middle east and Latin America, although initially described in Indians, subsequently seen in other racial and ethnic group(4). It usually starts from third and fourth decade of life, and has slight female predilection.

Etiology is not known in our case. Sun exposure has been postulated as one the causes. But as the age of the patient is very young, sun exposure may not be the cause in this case and other postulated etiological agents Abnormalities in the T-lymphocyte functions, hepatitis C virus, cosmetic agents such as kumkum and hair dyes mustard oil (contains the potential photosensitizer allyl thiocyanate, amla oil where photosensitivity may be precipitated by fragrances). So the probable cause could be abnormal T-lymphocyte function and genetic predisposition, further studies are required to confirm in this respect.(5)

LPP mainly occurs on sun exposed sites like face, neck, and intertriginous areas such as axillary, inguinal, and sub mammary folds. Palms, soles, nails are not affected, rarely it can be generalized and oral mucosa can be affected. The disease is insidious in onset and progressive course so that old lesions enlarge in size and deepening of colour can also be seen(4). Lesions may initially start as small, ill to well defined , oval to round macules, colour may vary from slate gray to brownish black. And later become confluent to larger areas of pigmentation. Pigmentation is mostly diffuse or reticular pattern. Although disease is asymptomatic it may also present with pruritis and burning sensation in one-third of cases(4).

Differential diagnosis of the condition being erythema dyschromica perstans, drug induced hyperpigmentation, , urticaria pigmentosa, macular amyloidosis, berloque melanosis, riehl's melanosis (pigmented cosmetic melanosis), heavy metal and tar induced pigmentation, frictional melanosis.(5)

The histopathological changes consist of vacuolar degeneration of basal layer of epidermis, hence thinning of epidermis. A band of infilterate of lymphocytes are usually present at the dermo-epidermal junction. In the dermis, a perivascular lymphohistiocytic infilterate and presence of melanophages or with melanin incontinence are the important features present(4). It has to be differentiated from ashy dermatoses as both have similar histopathology findings.

In dermoscopy, the colour of dots, globules and background are the important clue to diagnosis . The colour appreciated here ranged from dark brown to light brown. lichen planus pigemtosus shows larger dots and globules that are brownish in colour(due to pigment incontinence) this is due to melanin deposit which is relatively more superficial which is a result of lichenoid interface dermatitis occurring just at dermoepidermal junction. Where as in case of ashy dermatosis presence of small dots which bluish gray over a bluish background, which is due to tyndall effect due to presence melanin in deep dermis(6). And normal white dots which are seen due to eccrine openings.

Reported treatment modalities include topical immunomodulators which has shown improvement by lightening of pigmentation in 12 weeks(7), topical glucocorticoids,

Topical keratolytics, oral vitamin A 100000IU for 15 days and 15 days without treatment for 10 or more treatments reported improvement (1),superficial chemical peels, oral steroids, Nd-YAG laser therapy for 28 sessions shows improvement and lightnening of pigmentation(8)

Amanjot K arora reported a case of lichen planus pigmentosus which presented as racoon eyes in a 44 year old female. There was mainly periocular pigmentation. But in our case lesions are mainly seen as around eyes along with neck, upper back and upper limbs. Periorbital pigmentation may be due to idiopathic or secondary cause, which may be due to dermal melanocytosis, post inflammatory hyperpigmentation secondary to cosmetic, atopic allergic, genetic.(9) Kanwar et al reported that lichen planus pigmentosus usually affects female and rare in children, in contrast here our patient is seven year old.(10)

Conclusion:

lichen planus pigmentosus usually presents in third and fourth decade of life. In our case presentation started in three in year old boy. Etiology is unknown, probable cause may be abnormal T lymphocyte function and genetic predisposition. Hence, further studies are needed in this respect.

Declaration

Patient consent:

The authors certify that they have obtained all appropriate patient consent forms. In the form the patients has/have given his/her/their consent for his/her/images and other clinical information to be reported in 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 can be guaranteed.

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Ethical approval: Not required

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