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## Common Hypopigmented Skin Disorders in Baghdad Teaching hospital

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### Abstract:

**Objectives:** Hypopigmented skin conditions are common problem among general population and had different varieties among different age groups, this study was done to evaluate different types of hypopigmented skin disorders among Iraqi patients in Baghdad Teaching Hospital.

**Methods:** Over a period of 8 months, 266 patients with varieties of hypopigmented skin lesions were seen at the Outpatient Clinic of Dermatology and Venerology, Baghdad Teaching Hospital. Full history, a thorough physical examination was done for all patients.

**Results:** This study consisted of 155 (58.27%) males and 111 (41.73%) females, their ages range between 2-56 years with a mean  $\pm$  SD of  $16.99 \pm 12.36$  years, vitiligo 82 (30.83%) patients was the commonest disease seen, the next common disease was pityriasis versicolor 60 (22.56%) patients, followed by post-inflammatory hypomelanosis 45 (16.92%) patients, pityriasis alba 35 (13.16%), post herpes simplex leukoderma 24 (9.02%), nevus depigmentosus 8 (3.01%), Idiopathic guttate hypomelanosis 7 (2.63%) and albinism 5 (1.88%), Family history was reported with vitiligo (20.73%) pityriasis versicolor (30%), post inflammatory hypomelanosis (33.33%), pityriasis Alba (14.29%), idiopathic guttate hypomelanosis (28.57%) and albinism (20%). Koebner phenomenon was seen in vitiligo (35.36%), post inflammatory hypomelanosis (68.89%) and post herpes simplex leukoderma (70.83%).

**Conclusions:** The findings of this study showed that vitiligo and pityriasis versicolor are the commonest types of hypopigmented skin disorders among Iraqi patients and post-herpes simplex labialis leukoderma was interesting findings that is reported for the first time and could be considered as a variant of vitiligo.

**Keywords:** Hypopigmented skin disorder, post- herpes simplex leukoderma, vitiligo, Koebner phenomenon.

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### Introduction:

Hypopigmented skin disorders are common problem all over the world especially more distinct in dark skin people. These diseases are either genetically determined or acquired with or without genetic predisposition. They are either localized or generalized that might cause severe disfigurement lead into important emotional upset [1,2].

History and physical examinations usually can establish the diagnosis or at least limit the differential diagnosis [3,4].

The aim of the present work is to study the frequency of these hypopigmented disorders and to evaluate their different clinical aspects.

### Patients and methods:

Two hundred sixty-six patients with varieties of hypopigmented lesions were included in this study, 155 males and 111 females; the study was designed as history -base diagnostic approach, consisting of detailed history taking, physical examination and some confirmatory dermatological tests.

Full history regarding age, sex, resident, age of onset of hypopigmented skin lesion, family history of the disease, the degree of hypopigmentation and sites were recorded. Any drug history in relation to the present problem was asked about.

Wood's lamp examination was carried out to assess the depth of hypopigmentation and as confirmatory test when it is needed.

Koebner phenomenon was induced by a punch biopsy of the skin on the back of the patients and watched for 1-3 months to see the appearance of leukoderma.

### Results:

Table -I shows the distribution of the patients according to types of the diseases, age, age of onset, family history and Koebner phenomenon.

The age of patients ranged from 2-56 years with a mean  $\pm$ SD  $16.99 \pm 12.36$  years, Of the total cases, vitiligo 82 (30.83%) patients was the commonest disease seen, the next common disease was pityriasis versicolor 60 (22.56%) patients, followed by post inflammatory hypomelanosis 45 (16.92%) patients, pityriasis alba 35 (13.16%), post herpes simplex leukoderma 24 (9.02%), nevus depigmentosus 8 (3.01%), Idiopathic guttate hypomelanosis 7 (2.63%) and albinism 5 (1.88%), The frequency of different types of hypomelanotic skin disorders is shown in Figure 1, Males (58.27%) were affected more than females (41.73%) in general, while females (59.76%) were more commonly affected in vitiligo and males (75%) were more commonly affected in pityriasis versicolor.

Family history was reported with vitiligo (20.73%) pityriasis versicolor (30%), post inflammatory hypomelanosis (33.33%), pityriasis alba (14.29%), idiopathic guttate hypomelanosis (28.57%) and albinism (20%), Koebner phenomenon was positive in vitiligo (35.36%), post inflammatory hypomelanosis (68.89%) and post herpes simplex leukoderma (70.83%).

Vitiligo was associated with halo nevi in 17.07%, and alopecia areata in 8.54%. Sites of involvement were mainly the face (70.73%), chest and abdomen (52.44%), ankle and feet (46.34%) knee and elbow (38.1%), scalp hair (36.65%), back (26.83%), genitalia (18.29%) and palms and soles (3.65%). Clinically lesion found to be generalized in 69.51% and localized in 30.49%. Vitiligo was found in two stages of depigmentation, 41.46% of

the patients had stage I (white brown) alone or both stages together while 58.54% had stage II (milky white). Pityriasis versicolor was found to be localized in 63.33% and generalized in 36.67%. The disease involved the neck in 60% of the patients, trunk in 36.67%, upper arm in 23.33%, upper thigh in 8.33% and face in 3.33%.

Post inflammatory hypomelanosis has been recorded in this study due to a wide variety of cutaneous diseases; psoriasis (37.77%), atopic dermatitis (26.66%), lichen striatus (17.77%), pityriasis rosea (13.33%), discoid lupus erythematosus (2.22%) and lichen planus (2.22%).

Pityriasis alba was found mainly as multiple lesions in 85.71% of cases and a single lesion in 14.29%. The lesions were confined to the face in 80% and other sites as well as face in 20%. The lesions were hypomelanotic in 82.86% and erythematous scaly in 17.14%.

Post herpes simplex leukoderma of the lips was present in 9.02% of hypopigmented cases. These cases might progress into ordinary vitiligo as it was observed in 8.33% of patients with post herpes simplex leukoderma. Each attack of herpes simplex labialis was followed by new macule of leukoderma.

Nevus depigmentosus was seen in 3.01% of all cases. 5 males (62.5%) and 3 females (37.5%). Wood's lamp examination revealed very slight difference from surrounding normal skin.

Idiopathic guttate hypomelanosis affected mainly sun exposed areas of upper and lower extremities in 71.42% and trunk in 28.53%.

Albinism; four cases were ordinary or complete albinism with snow hair, while 1 patient was partial albinism with red hair.

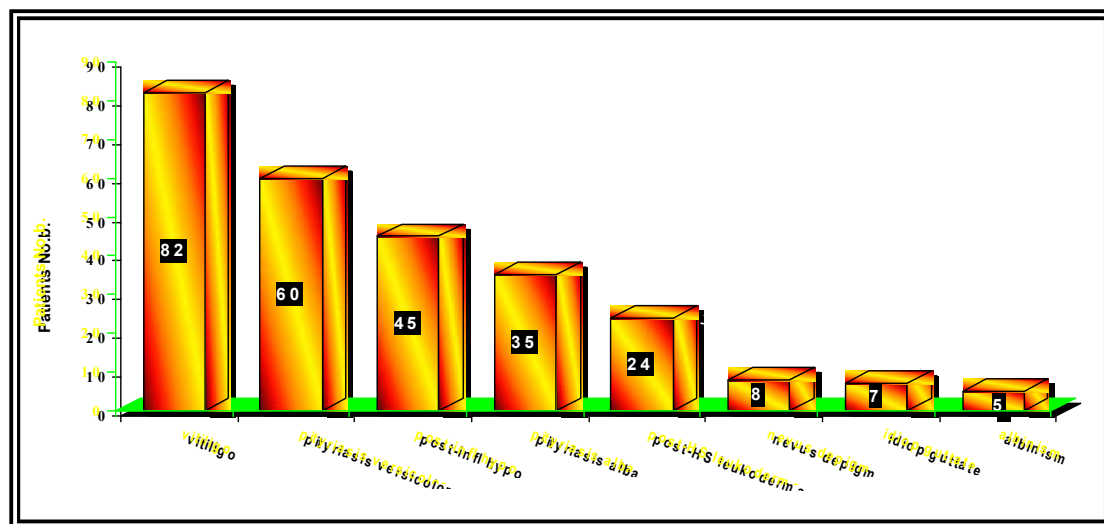


Figure- I: frequency of different types of hypopigmented skin disorders among Iraqi patients

Table (I): Showing patient's numbers, age, age of onset, family history and Koebner phenomenon in different types of hypopigmented diseases

| Types of hypopigmented skin disease | Patients No. % |       | Age( years) Mean± SD | Age of onset Mean± SD | Family history (+ve) No. % |       | Koebner phenomenon (+ve) No. % |       |
|-------------------------------------|----------------|-------|----------------------|-----------------------|----------------------------|-------|--------------------------------|-------|
|                                     | No.            | %     |                      |                       | No.                        | %     | No.                            | %     |
| Vitiligo                            | 82             | 30.83 | 18.3±13.7            | 15.6±13.4             | 17                         | 20.73 | 29                             | 35.36 |
| Pityriasis Versicolor               | 60             | 22.56 | 18.8±8.6             | 16.27±3.68            | 18                         | 30    | -                              |       |
| Post inflammatory hypomelanosis     | 45             | 16.92 | 18.13±11.43          | 16.15±9.5             | 15                         | 33.33 | 31                             | 68.89 |
| Pityriasis alba                     | 35             | 13.16 | 8.6±3.1              | 7.4±2.5               | 5                          | 14.29 | -                              |       |
| Post herpes simplex                 | 24             | 9.02  | 20.04±9.77           | 19.25±9.49            | 13                         | 54.17 | 17                             | 70.83 |
| Nevus depigmentosus                 | 8              | 3.01  | 4.75±1.49            | At birth              | -                          |       | -                              |       |
| Idiopathic guttate hypomelanosis    | 7              | 2.63  | 40.57±9.8            | 36.7±7.1              | 2                          | 28.57 | -                              |       |
| Albinism                            | 5              | 1.88  | 11.4±5.2             | At birth              | 1                          | 20    | -                              |       |

## Discussion:-

Hypopigmented skin disorders are common skin problem in Iraq and in the world. Hypomelanosis may be congenital or acquired, circumscribed or generalized and partially or completely hypomelanotic. It can affect all humans regardless of race, age and sex<sup>[1]</sup>.

In present study the frequency of hypopigmented skin diseases were as follow: vitiligo 30.83% pityriasis versicolor 22.56% and post inflammatory hypomelanosis 16.92% while in Iraqi children it was reported that vitiligo 45.53% and pityriasis alba 38.22% were the commonest problems<sup>[4]</sup>.

Genetic factors are undoubtedly involved in vitiligo and about 30% of patients have positive family history<sup>[1,2,3,5]</sup>. While in our study it has been reported with vitiligo in 20.73%, pityriasis in 30%, post inflammatory hypomelanosis 33.33%, pityriasis alba 14.29%, idiopathic guttate hypomelanosis 28.57% and albinism 20%.

Koebner phenomenon is characteristic of at least a third of those with vitiligo<sup>[6]</sup>, while in the present work it was seen in vitiligo in 35.36%, post inflammatory hypomelanosis 68.89% and post herpes simplex leukoderma (70.83%).

Surprisingly both post inflammatory hypomelanosis and post herpes simplex leukoderma had more positive Koebner phenomenon than vitiligo, this could not be explain.

Vitiligo is a relatively common cause of leukoderma; both sexes seem equally vulnerable to disease, although females' prevalence in some studies<sup>[1,2,3,4,7,8]</sup>.

In this study, it was found that females (59.76%) were more affected than males (40.24% ) with a ratio of 1.49:1, this probably either that Vitiligo like any auto immune disease affect females more than males or females seek treatment more early and more frequently because of its bad cosmetic appearance.

Vitiligo has been reported to pass into 2 stages of depigmentation. Stage I (partial pigment loss) alone or both stages together in the same patient seen in 45.72% while stage II (complete pigment loss) appeared in 54.28% of the patients<sup>[9,10]</sup>. This was confirmed by present work, as it was found that stage I alone or both stages together was seen in 41.46% of vitiligo patients while stage II noted in 58.54%.

Regarding the pityriasis versicolor, post inflammatory hypomelanosis and pityriasis alba, the clinical picture and sites of involvement in this study are comparable to what has been reported<sup>[4]</sup>.

Nevus depigmentosus is well documented cause of hypopigmentation in infant and children<sup>[1,2,3]</sup>, but often confuse with vitiligo especially for those who are unfamiliar with this condition.

We concluded that idiopathic guttate hypomelanosis

seems to be relatively common among Iraqi patients.

Post-herpes simplex labialis leukoderma was interesting finding that is reported for the first time and could be considered as a variant of vitiligo.

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