

Pigmento in Leucoderma

Clinical Evaluation of an Ayurvedic Combination Therapy

Dr. B. Safia

MBBS, M.D, DVD, Asst Prof of skin & VD, Calicut Medical College, Calicut, India.

INTRODUCTION

The skin covering the human body monitors the changes in the environment. It is composed of an outer layer the epidermis and the inner layer called the dermis. The color of the skin is determined by five pigments-melanoid, melanin, carotene oxyhaemoglobin and reduced hemoglobin. Of these melanin is the chief source of skin color.

Melanin is produced in specialized cells called melanocytes, which occur, at the junction of the epidermis with the dermis. It protects the body from the harmful effects of the ultra-violet rays of sun. Its formation is controlled by a hormone produced by the Anterior pituitary called Melanin Stimulating Hormone and A.C.T.H. and is derived from tyrosine. Tyrosine secretion transfers the fully formed melanin granules from the melanocytes to the Malpighian cells. Disturbance in the tyrosine metabolism leads to pigment alterations that are variously termed as achromia, vitiligo and leucoderma. These alterations may be brought about at any period in life and are independent of sex.

The following are some of the factors considered to have aetiological relationship with the occurrence of leucoderma. Immunologic and neurochemical basis are also suggested.

- a) INJURIES due to burns, chemicals, exposure to dyes, photographic developers pressure points caused by plastic straps, tight clothing etc.
- b) INFECTIONS such as leprosy, intestinal infections and worm infestations, psoriasis, herpes, atopic dermatitis, etc.
- c) NUTRITIONAL deficiency states like anaemia, avitaminosis, liver disorders. etc.
- d) HORMONAL factors such as pituitary thyroid imbalance.
- e) DRUG INDUCED by such drugs as antibiotics. B.A.L. quinacrine, anticancer drugs.
- f) IDIOPATHIC

The present treatment consists of identifying and elimination of the causative factors such as septic focus wherever possible. Improved personal hygiene and nutritional supplementation with proteins and vitamins accompanied with the use of psorelin are other measures commonly employed. The treatment is necessarily prolonged and the response is painfully slow, it at all. We were favorably impressed with the results reported with the use of PIGMENTO and encouraged to give the regimen a fair trial.

DRUG

PIGMENTO is combination therapy of oral tablets along with the use of an ointment externally. From the perusal of ingredients and their pharmacological actions, the formulation seems to have hepato-corrective, anthelmintic, melanogenetic actions.

MATERIALS & METHODS

Sixty cases of pigment disorders, with acquired white patches from the patients attending our clinic in 1991 were selected for this study. The detailed history as to origin, duration progress of the disorder-treatment taken, personal history as to occupation, diet, habit, addiction, drugs, past history of any illness, and family history noted, consent was taken for this trial. They were examined as to general health, weight, blood pressure, laboratory examination of urine, stool, blood, etc. done. The data is given below.

AGE IN	1 to 10	11 to 20	21 to 30	31 to 40	above 41	Total YEARS
No of cases	4	11	17	16	12	60

SEX : MALE – 27, FEMALE – 33 = TOTAL – 60

OCCUPATION:

Students – 18, Householders-18, Workers-24, TOTAL = 60

Photographers-4, Dyers-10, Printers-10, Total Workers=24

DURATION OF DISORDER:

Less than 6 months	6 – 12 months	Over 12 months	Total
19 cases	25 cases	16 cases	60 cases

DISTRIBUTION OF PATCHES:	Disfigurement
Head and face	6
On the trunk	9
Upper extremities	12
Lower extremities	18
Isolated patches	2
General	13
Total Cases	60

HISTORY OF PREVIOUS TREATMENT AND RESULTS:	
Treated Earlier	26
- Partially benefited	4
- No response	22
Not treated earlier	34
TOTAL	60

LABORATORY FINDINGS:

URINE sugar present in	4
Stool ova Cysts	30
Blood Hb less than 70%	18

DOSAGE & OBSERVATION

All the patients were advised maintenance of better personal hygiene. Nourishing less spicy diet was recommended and they were advised to avoid meat, egg, fish, sour articles of food like curd, kokam, tamarind, vinegar, cooking soda to soften food. etc. Loose clothes were suggested, avoiding tight watch straps and other tight fitting articles. Contact with chemicals, dyes and photographic chemicals was to be avoided as best as possible.

Tablet: Adults – Two tablets t.i.d. for 4 months.

Below 12. One tablet t.i.d. for 4 months.

Ointment: Application of the ointment to depigmented part in a thin layer without rubbing and exposure to the morning sun for 2 minutes to start with. If skin reaction like burning sensation, itching, blister formation if any was tolerable, the exposure to morning sun was gradually increased to 20 minutes daily.

Where necessary additional treatment for anaemia, dysentery and worms was given, the cases were checked every 15 days to assess the progress, amelioration of symptoms, appearance of pigmented spots in the affected area as well as to enquire about side effects, if any. The treatment was continued for four months and observation for eight months.

Ten patients did not continue treatment and were dropped from further study leaving us 50 patients.

RESULTS	RATING	
Patients showing response to 4 months therapy	30 (60%)	-
Patients responding in 4 months Without relapse	24 (48%)	Good response
Patients responding but relapsed Subsequently	6 (12%)	Fair response
No response	20 (40%)	Failure
Total	50 (100%)	

DISCUSSION

Leucoderma is an ancient affliction of the mankind. It has been variously considered an ill omen and mistaken for leprosy, infective disease, etc. Modern science recognizes it as non-infectious and non-inherited disorder of skin pigmentation which is acquired probably due to sluggish liver, as an aftermath of diarrhoea, dysentery, intake of unbalance or excess of sour foods or contact with harmful chemicals, due to pressure at certain points and so on. The clinical management of the condition has been to stimulate pigmentation with oral and local applications, which utilize sunrays to induce pigment formation. The drugs available, which are mostly derived from psoralen, have provided varying results often accompanied with undesirable side effects. In the management of this condition, PIGMENTO appears to be helpful. In our study 30 cases out of 50 showed improvement and the drug was free from side effects. Patients with dysentery and worm infestation were the earlier to respond. These were followed by those who had patches, along with sluggish liver and anaemia.

Wherever an association with exposure to chemicals was recognized and eliminated during the therapy, response was noticeable to the treatment. Cases of recent origin not involving extensive areas of skin among younger age group were earlier to respond. Patches on the extremities and on the dorsal aspect of the body showed earlier response as compared to those on the trunk or face or the ventral aspect of the body. Any relationship between the sex of the patient and the response was not indicated.

SUMMARY

50 cases of acquired disorder of skin were studied in these trials in year 1991. Their history was taken and general examination along with laboratory investigations was made. They were put on a regimen consisting of tablets for oral use along with an ointment to be applied to the affected parts before exposure to the sunlight in the morning for 5 to 15 minutes. During the four months of therapy, check up of the cases was made every 15 days to observe pigmentation and side effects if any. In the patients showing good response, an additional four months' check up was maintained even though the drug was withdrawn, to note relapses, if any.

Out of the study group of 50 cases, thirty showed repigmentation, six out of these 30 showed partial depigmentation on further observation. Rate of response was Good in 24 cases or 48%. Fair in 6 cases (12%), and poor in 20 cases (40%). Cases with diarrhoea, dysentery, sluggish liver and worm infestation along with patches of recent origin and not involving large areas responded early. The response in those with pressure sores, burn scars and chronic cases was slow and poor.

CONCLUSION

The drug seems to be acting as under :-

1. Correction of liver function – disturbed due to infection by dysentery, worm, anaemia by correctives like katuki, Sarpankha, Rohitaka, Kalmegh, Kirata, etc.

2. Harnessing the sun's rays to stimulate melanocytic activity by Bakuchi and other drugs.
3. Tranquillizing the patient by Vacha, Jatamansi, etc., we are aware of the fact that before a conclusive opinion on PIGMENTO could be formed a far more exhaustive study would be necessary. Our limited study, however suggests that it is a valuable addition to the available drugs for this disfiguring skin disorder.

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