CLOFAZIMINE IN VITILIGO

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Summary

11 patients with vitiligo were treated with Clofazimine, for a period of 3 months. There was no evidence of repigmentation of the affected areas in any of the patients treated. Exposure to sunlight in addition, did not improve the response.

Vitiligo continues to be shrouded with mystery. This common condition distributed worldwide, still remains beyond comprehension, so far as its etiology and the managemet are concerned. Consequently the etiological concepts and the modalities of treatment suggested for this condition are legion.

To diagnose vitiligo is much easier than to treat it. A number of drugs have so far been used for the treatment of this disease, though often with a disappointing result. Clofazimine is a recent addition to this group of drugs, claimed to have an appreciable pigmentogenic potential. Repigmentation was seen to appear between 15 days and one month in 21 out of 30 patients treated with Clofazimine.[1] Considerable repigmetation of vitiliginous skin was also observed in 8 white female patients treated with Clofazimine and sun exposure[2]. Repigmentation in these patients occured in a punctate perifollicular manner after 6 to 8 weeks of treatment.

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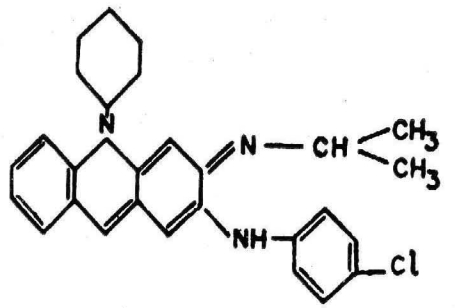
On the basis of these reports, a clinical trial with Clofazimine was conducted in vitiligo patients.

Pharmacology :-

Clofazimine is one of the long series of phenazine dyes, synthesized by V.C. Barry and his colleagues. It has the following chemical structure[3] :-



MOLECULAR FORMULA = $C_{27}H_{22}Cl_2N_4$
MOLECULAR WEIGHT = 473·3
MELTING POINT = 215°C

Chart I Molecular structure of clofazimine

Taken orally, the drug is slowly absorbed into the blood stream and it is subsequently stored in crystalline form in different organs, especially those rich in R.E. Cells. The drug has not been detected in brain, probably because it cannot cross the blood-brain barrier[4]. In a daily dose of 300 mg, taken orally,

TABLE I
Age and Sex Distribution

Total No. of Cases	Males	Females	Age in Years			
			10—15	16—20	21—30	31—35
11	6	5	3	6	1	1

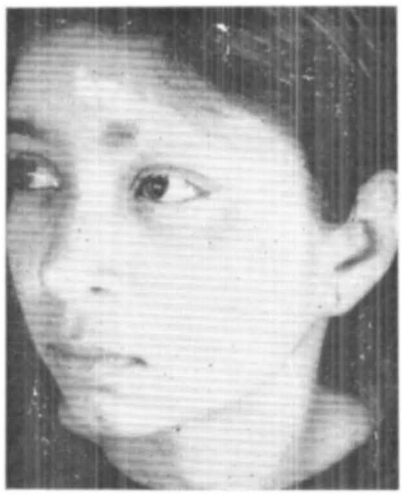


Fig. 1 One of the vitiligo patients before treatment

an average blood concentration of 1.15 ug/ml can be obtained. Excretion of this chemical from tissues is very slow, traces of it being still detectable in the skin, 1 to 2 years after the last dose.

Material and Methods

11 Vitiligo patients, attending the Skin Out-patients Department of Sir Sunderlal Hospital, Banaras Hindu University, Varanasi, were included in the clinical trial. The diagnosis of vitiligo was made on the basis of history and clinical features. Patients were of either sex, and in the age group of 10 to 35 years (Table I). Duration of the disease varied from 3 months to 10 years (Table II). None of the patients had any form of therapy for vitiligo during the preceding 2 months. 6 out of the 11 patients were treated in past at various places, with psoralen locally or orally or both, for 3 to 6 months – no appreciable improvement. Each of the patients was asked to take one capsule of clofazimine (100 mg) a day, for 3 months uninterruptedly, 6 patients out of 11, selected at random, in addition exposed the depigmented area to natural sunlight for 15 minutes a day between 10 a.m. and 2 p.m. Patients were reviewed fortnightly to assess progress in repigmentation of the vitiligo patches.

Observations

Generalised pinkish to dusky red discolouration of the skin was observed in all the patients. This appeared between 2 and 4 weeks, after the treatment started. Discolouration was more apparent on sunexposed areas, as well as on the depigmented areas exposed to

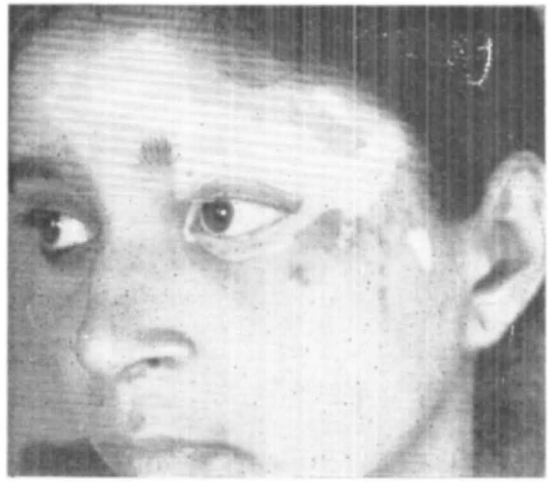


Fig. 2 The same patient after 3 months of clofazimine therapy along with sunexposure, showing no evidence of repigmentation

TABLE 2

Duration of the Disease

Total No. of Cases	Duration in Years			
	Less than 1	2 — 3	4 — 5	6 — 10
11	5	—	1	5

sun in addition to the drug. In none of the patients did this discolouration deepen subsequently to any considerable extent. Repigmentation of the vitiligo lesion was not evident in any of the patients treated. Generalised skin discolouration regressed to a great extent in all the patients, at the end of one month after the drug was stopped (Fig. 1 and 2).

Conclusion

Clofazimine therapy in the dose of 100 mg a day for 3 months, with or without sun exposure had no beneficial effect on the vitiligo patients included in this trial.

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