THERAPEUTIC TRIALS

EVALUATION OF TOLBUTAMIDE TREATMENT IN VITILIGO

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INTRODUCTION

Vitiligo is an acquired cutaneous condition due to loss of pigment without any other apparent changes in the skin. The achromic patches manifest themselves as single or multiple, variously sized and differently shaped lesions on any part of the body. The course of vitiligo is variable. It is usually progressive and has a tendency to run in families. Complete repigmentation seldom occurs spontaneously. Often there are periods of active spreading and remissions. At times the process remains stationary or even undergoes regression.

The present trial was planned because of a chance finding in the case of a psoriatic female patient aged 42 years. Kabelitz and Kappel (1958-59)[3] had reported favourable results of tolbutamide therapy in psoriasis. Therefore this patient was put on tolbutamide. Three weeks after the therapy she developed pigment spots in her vitiliginous patches all over the body. Inder Singh (1961)[2] also has observed appearance of new pigment after tolbutamide therapy for vitiligo.

MATERIALS AND METHODS

Patients attending the dermatology out-patients department in a general hospital were taken up for the study. They were divided into two groups. One was given tolbutamide and the other was given a placebo. Though the grouping was not done by random sampling, no special criteria were used in selection for a particular group. They were put in one or the other category so as to have comparable groups. They were treated as ambulatory out-patients.

In group A, 16 patients were treated with tolbutamide. In group B, 16 patients were given placebo (Table I). Detailed history sheets were maintained and case notes entered from time to time. The following investigations were carried out routinely before starting the treatment and were repeated after 12 weeks. (1) Body weight (2) stool examination for cysts and ova (3) Routine urine examination (4) Hemogram viz. Hb percent, RBC, WBC total and differential counts. (5) Fasting blood sugar (6) Liver function testsviz. total serum proteins, serum albumin, serum globulin, thymo turbidity test, icteric index, Van den Bergh reaction and serum bilirubin. (7) Serologica test for syphilis.

Tolbutamide was given orally in the form of tablets, divided in two or three doses. The dosage varied from 0.5 to 1.5 g of tolbutamide per day, depending on the age of

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the patient. For group B blank tablets of identical appearance were given. Supplementary treatment with anthelmintics for worms and iron for low hemoglobin levels were given wherever indicated. On the basis of previous observations by Gokhale and Gokhale (1964)[1] it was arbitrarily decided to consider a case as failure if no signs of pigmentation were observed after a therapy of 12 weeks.

The exposed right forearm is more pigmented

RESULTS

The present report details the results of the investigations of 32 patients suffering from vitiligo. Of these 12 were male and 20 were female. In the male group the age range varied from 4 to 38 years, and in the females from 6 to 36 years. Serological tests for syphilis were negative in all the cases. Hemoglobin ranged from 7.5 to 17.5 g. percent. Fasting blood sugar before starting the treatment ranged from 72 to 116 mg. percent. Urine of all patients was normal. Serum proteins varied from 5.5 to 7.2 g percent. Ten patients suffered from worm infestation. Subsequent examination of the above items showed no significant change. No striking change in body weights was observed.

First signs of appearance of pigment were observed in some cases as early as 4 weeks of treatment. Cases are on record where pigment appeared as late as 21 weeks, but usually most of the cases that responded to the treatment developed pigment within 12 weeks.

Out of 16 cases on tolbutamide 12 developed pigment in 4 to 11 weeks time (Table 1). One case showed signs of pigmentation after 21 weeks. One patient, a male, aged 5 years developed some pigment after 3 weeks but showed no further progress and hence was counted as a failure. Two cases, both females, aged 9 and 15 years never developed any pigment.

Five patients complained of itching prior to administration of the drug. In four of these cases itching completely subsided in three weeks time. In one case it subsided after three weeks but re-appeared after about six weeks. At that time the depigmented areas developed erythema. Subsequently these areas showed signs of development of pigment. Out of 16 cases under placebo (group B), one male patient aged 29 years developed pigment in 8 weeks.

MODE OF PIGMENT FORMATION

In some cases spots of pigment formed around the hair follicles and then spread out. Some patients developed pigmentd specks irregularly over the depigmented areas. In other pigment crept from the margins on to the depigmented patch. In certain cases the depigmented patches now looked hypopigmented. In one case in which one patch on the leg had all white hair, pigment started along the margins and few hair turned black.

No seasonal variation in the development of pigment was observed. However, it has been noticed that parts exposed to the sun developed better pigment. This was well illustrated in one case of a female aged 16 years, wearing Indian sari. Her style covered the left side of neck and the left arm. The exposed supra-clavicular region and right forearm (Photo 1) had developed better and darker pigment than its counterpart.

Various factors responsible in causation of vitiligo are not well understood and hence it is not possible to readily explain the mode of action of Tolbutamide. It may be that the drug some way rectifies enzymic activity in the metabolism of tyrosine in vitiligo.

SUMMARY

A trial to evaluate the effects of tolbutamide on pigment formation in vitiligo was undertaken. Sixteen patients were treated with tolbutamide and an equal number with a placebo. Twelve cases on tolbutamide and one case on placebo developed pigment.

TABLE I

CASES TREATED WITH TOLBUTAMIDE AND PLACEBO

Group A

Tolbutamide

Srl. No.	Age in years	Sex	Pirgment Formation in	Progress
1	5	M	9 weeks doubtful	Nil
2	5	M	4 weeks	slow
3	6	F	4 weeks	slow
4	9	F	Nil	Nil
5	11	M	4 weeks	good
6	13	F	4 weeks	good
7	14	F	5 weeks	good

TABLE 1 (Contd.)

Srl. No.	Age in years	Sex	Pigment Formation in	Progress
8	15	F	Nil	Nil
9	16	M	6 weeks	good
10	16	F	Nil	Nil
11	16	F	8 weeks	good
12	19	R	8 weeks	fair
13	22	F	4 weeks	good
14	33	M	11 weeks	fair
15	36	F	5 weeks	good
16	38	M	5 weeks	good

TABLE 2—Group B

Placebo

Srl. No.	Age in years	Sex	Pigment Formation in	Progress
1	4	M 7/8	Nil	Nil
2	6	F	Nil	Nil
3	7	M	Nil	Nil
4	11	F	Nil	Nil
5	12	F	Nil	Nil
6	12	F	Nil	Nil
7	13	F	Nil	Nil
8	15	F	Nil	Nil
9	16	F	Nil	Nil
10	16	F	Nil	Nil
11	17	M	Nil	Nil
12	19	F	Nil	Nil
13	22	F	Nil	Nil
14	24	M	Nil	Nil
15	25	M	Nil	Nil
16	29	M	8 weeks	Good

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