

RESULTS

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Forty-two patients with vitiligo of different types were included in this study.

Results of the clinical data were summarized in table (I).

- **Sex:** Among the 42 examined cases, 15 were male (35.7%) and 27 females (64.3%).
- **Age:** The age of the patients ranged from 8 to 50 years with a mean of 25.4.
- **Duration:** The duration of the disease ranged from one year to 15 years with a mean of 4.52.
- **Family history:** 38 of cases had a negative family history (90.5%) while the remaining 4 cases had a positive family history (9.5%).
- **Type of vitiligo:** Twenty four patients presented with focal vitiligo, three patients with segmental and fifteen patients with patches of generalized vitiligo.
- **Course:** In all patients, the course of the disease was stationary.
- **Sites:** Different sites of the body were affected namely: face (8), neck (4), upper limbs (3), lower limbs (8), breast (3), hands (5), trunk (3), forearms (5) and feet (3).

Neither epidermal abrasion alone nor topical applications of 5-fluorouracil without epidermal abrasion resulted in repigmentation in any of the control sites. Repigmentation was induced only when topical applications of 5-fluorouracil under occlusion was carried out following epidermal abrasion.

The usual course of repigmentation was as following

Erythema, oedema and erosion were noted in the lesions. These changes increased progressively for at least two to three days. Then formation of crust was noted on about the fourth day and it fall off by itself leaving a clear translucent membrane. Moderate erythema and oedema were seen in the surrounding normal skin but no perilesional erosion occurred. The topical application of 5-fluorouracil was stopped on the 10th day after operation when the whole dermal surface of the treated areas was exposed.

Epithelialization was completed within 10 days after the topical application of 5-flurouracil was stopped. Repigmentation began within one to two weeks after epithelialization. It took place in a brown perifollicular macular pattern within the lesions which then enlarged and coalesced. It began from the margins and spread centripetally, sometimes repigmentation occurred diffusely.

Gradual repigmentation usually occurred within the first two months after topical application of 5-fluorouracil. Although repigmentation became darker than the normal skin colour in some cases. It lightened with time to approach the colour of the normal surrounding skin. All the patients experienced some discomfort or burning sensation on the first few days.

The clinical results of the study are shown in tables I and II.

Twenty six (62%) of the 42 patients showed complete or almost complete repigmentation and five patients (12%) showed very good response of repigmentation, three patients (7%) showed good response of repigmentation, four patients (9.5%) showed mild repigmentation. The

remaining four patients (9.5%), including three patients with segmental vitiligo, showed no response. Out of the 24 patients with the focal type of vitiligo, 19 patients (79.3%) were classified as excellent, three patients (12.5%) were listed as very good, one patient (4.1%) mild and one patient showed no repigmentation. Out of the fifteen patients with the generalized type of vitiligo, seven patients (46.6%) were classified as excellent, two patients (13.3%) were categorized as very good, three patients (20%) were listed as good, and the remaining three patients (20%) showed mild repigmentation (Table II).

The patients were asked to return for follow up every other week. Out of the 26 patients who showed complete repigmentation, two patients (7.7%) showed recurrent vitiligo in the treated sites within 6 months.

No alteration in the results of the hemogram, hepatic or renal function tests was found in this series of patients.

Table III showed the skin types of our patients they ranged from type II through III, IV and V in the study. This table showed no definite relation between skin type and degree of response to therapy.

Table IV showed the age of the patients ranging from 8 years to 50 years. The degree of response in patients aged more than 40 years was poor compared to younger patients.

Table V showed the types of vitiligo, the best results were obtained in focal types of vitiligo.

Table VI showed family history of patients with vitiligo +ve in 4 patients out of 42 patients.

Table (1): Patients and treatment data.

Case	Age/year	Sex	Type of skin	Type of vitiligo	Disease duration before treatment	Treated area	Clinical response	Family history	Post-operative followup (every 2 weeks)	Recurrence
1	17	Female	III	Focal	6 years	Neck (Back)	Excellent	-ve	1 year	None
2	24	Female	IV	Generalized	10 years	Both legs (extensor surface)	Excellent	-ve	1 year	None
3	14	Male	III	Generalized	8 years	Below right eye	Excellent	-ve	1 year	Yes (after 6 months)
(4)	25	Female	IV	Generalized	3 years	Neck (left side)	Excellent	-ve	1 year	None
5	50	Male	IV	Generalized	3 years	Both legs (extensor surface)	Very good	-ve	1 year	None
(6)	16	Male	IV	Generalized	3 years	Right fore arm	Excellent	-ve	1 year	None
7	48	Female	III	Generalized	5 years	Dorsum of right hand	Good	-ve	1 year	None
8	42	Female	IV	Focal	2 years	Left forearm	Excellent	-ve	1 year	None
9	36	Male	III	Segmental	1 year	Face	None	+ve	1 year	---↑
10	15	Female	III	Generalized	4 years	Right knee	Excellent	-ve	1 year	None
11	30	Female	II	Generalized	2 years	Chin & face	Mild (fair)	-ve	1 year	None
12	20	Female	III	Generalized	10 years	Left forearm	Excellent	-ve	1 year	Yes (after 6 months)
13	46	Male	IV	Focal	1 year	Distal part of the dorsum of left (middle finger)	None	-ve	1 year	---↑
14	32	Female	III	Focal	6 years	Left breast (around nipple)	Excellent	-ve	1 year	None

* The patients response to 5-fluorouracil therapy was classified as follows:

None = no repigmentation

Good = 25% to 50% repigmentation

Excellent = Greater than 75% repigmentation

---↑ = Ellipsis indicates that recurrence is unnecessary to discuss because the patient's condition did not respond to therapy.

mild (fair) = up to 25% repigmentation
 very good = 50% to 70% repigmentation
 ○ = Control case.

Table (1): Patients and treatment data.

Case	Age/year	Sex	Type of skin	Type of vitiligo	Disease duration before treatment	Treated area	Clinical response	Family history	Post-operative followup (every 2 weeks)	Recurrence
15	43	Female	II	Generalized	12 years	Chin of face	Mild (fair)	-ve	1 year	Not±
16	42	Male	IV	Focal	3 years	Dorsum of right hand	Excellent	-ve	1 year	Not±
17	21	Female	IV	Focal	2 years	Left leg	Excellent	-ve	1 year	Not±
(18)	23	Male	IV	Focal	2 years	Dorsum of both foot	Very good	-ve	1 year	Not±
19	8	Female	III	Focal	2 years	Face	Mild (fair)	-ve	1 year	Not±
20	25	Female	III	Generalized	3 years	Right side of neck	Good with hyperpigmented border	-ve	1 year	Not±
21	35	Female	III	Focal	1 year	Frontal area of face	Excellent	-ve	1 year	Not±
(22)	34	Male	IV	Focal	2 year	Left leg	Excellent	+ve	1 year	Not±
23	23	Male	IV	Focal	15 years	Left side of frontal area of face	Excellent	+ve	1 year	Not±
24	22	Female	III	Focal	3 years	Dorsum of right hand	Very good	-ve	1 year	Not±
25	22	Female	IV	Focal	3 years	Back	Excellent	-ve	1 year	Not±
26	20	Female	IV	Generalized	14 years	Left foot below and on medial malleolus	Good	-ve	1 year	Not±
27	15	Female	III	Generalized	4 years	Left knee	Very good	-ve	1 year	Not±
28	25	Female	III	Generalized	3 years	Right side of neck	Mild (fair) hyperpigmented border	-ve	1 year	Not±

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= up to 25% repigmentation
= 50% to 70% repigmentation
= Control case.

= Ellipsis indicates that recurrence is unnecessary to discuss because the patient's condition did not respond to therapy.

Table (1): Patients and treatment data.

Case	Age/year	Sex	Type of skin	Type of vitiligo	Disease duration before treatment	Treated area	Clinical response	Family history	Post-operative followup (every 2 weeks)	Recurrence
(29)	25	Female	III	Focal	1 year	Right shoulder	Excellent	-ve	1 year	None
30	25	Female	IV	Focal	1 year	Left breast	Excellent	-ve	1 year	None
(31)	19	Male	III	Generalized	2 years	Left forearm	Excellent	-ve	1 year	None
32	15	Female	III	Focal	3 years	Dorsum of right foot	Excellent	-ve	1 year	None
(33)	16	Female	IV	Focal	5 years	Right side of neck	Excellent	-ve	1 year	None
34	25	Female	IV	Focal	4 years	Left leg	Excellent	-ve	1 year	None
35	23	Male	IV	Focal	4 years	Dorsum of left hand	Excellent	-ve	1 year	None
36	22	Male	IV	Focal	5 years	3 patches on left forearm	Excellent	-ve	1 year	None
37	22	Male	IV	Focal	4 years	3 patches on extensor surface of right elbow	Excellent	-ve	1 year	None
38	25	Male	IV	Focal	5 years	One patch on extensor surface of right elbow	Excellent	-ve	1 year	None
39	23	Male	IV	Focal	3 years	Left periauricular	Excellent	+ve	1 year	None
(40)	22	Female	III	Focal	3 years	Both elbow	Very good	-ve	1 year	None
41	16	Female	III	Segmental	14 years	Right breast	None	-ve	1 year	---↑
42	16	Female	III	Segmental	3 years	Abdomen	None	-ve	1 year	---↑

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mild (fair)

very good

○

= up to 25% repigmentation

= 50% to 70% repigmentation

= Control case.

Table (II): Summary of results.

Type of vitiligo	Clinical results					
	No. of cases	Excellent	Very good	Good	Fair mild	None
Focal	24	19	3	-	1	1
Sgmental	3	-	-	-	-	3
Generalized	15	7	2	3	3	-
Total (%)	42	26 (62%)	5 (12%)	3 (7%)	4 (9.5%)	4 (9.5%)

Table (III): Relation between skin type and improvement.

Skin type	No. of patients	Patients improved
I	-	-
II	2	2
III	20	17
IV	20	19
V	-	-
Total	42	38

Table (IV): Relation between age of patients and improvement.

Age in year	No. of patients	Patients improved
5-	1	1
10-	10	8
20-	20	20
30-	5	4
40-	5	4
50-	1	1
Total	42	38

Table (V): Relation between type of vitiligo and improvement.

Type of vitiligo	No. of patients	Patients improved
Focal	24	23
Segmental	3	-
Generalized	15	15
Total	42	38

Table (VI): Relation between vitiligo and family history of vitiligo.

Total	+ve family history	-ve family history
42	4	38

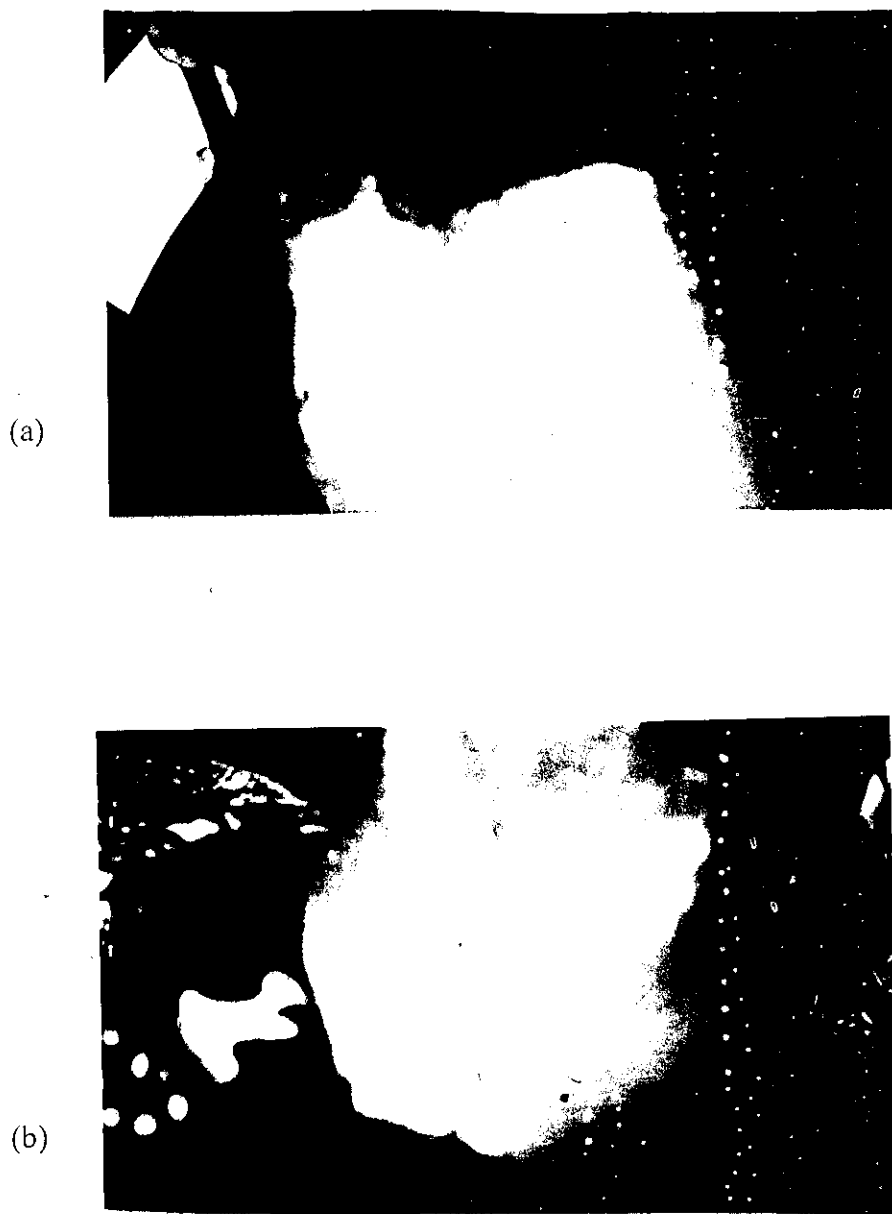


Fig. (4): Show large patch of focal vitiligo.

(a) Before treatment.

(b) After treatment.

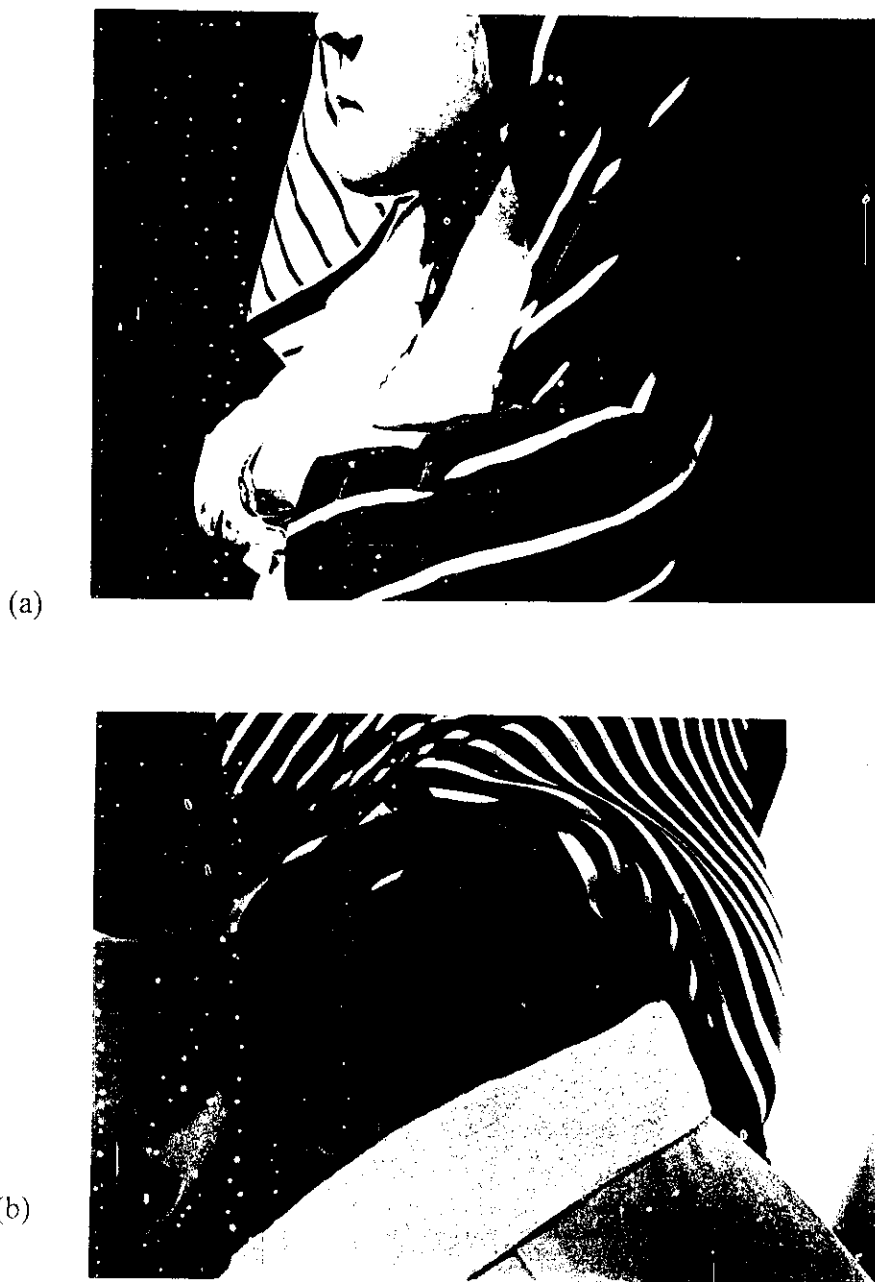
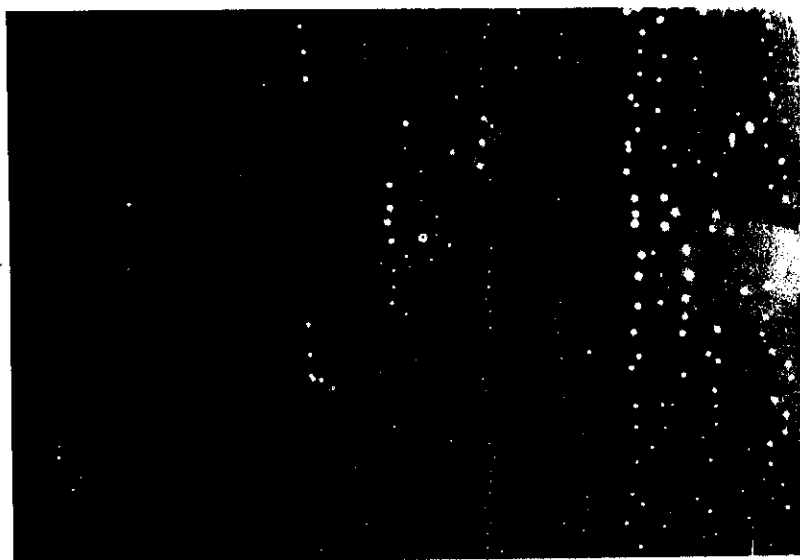


Fig. (5): Show patch of vitiligo on left side of neck
(a)Before treatment.
(b)After treatment.

(a)



(b)

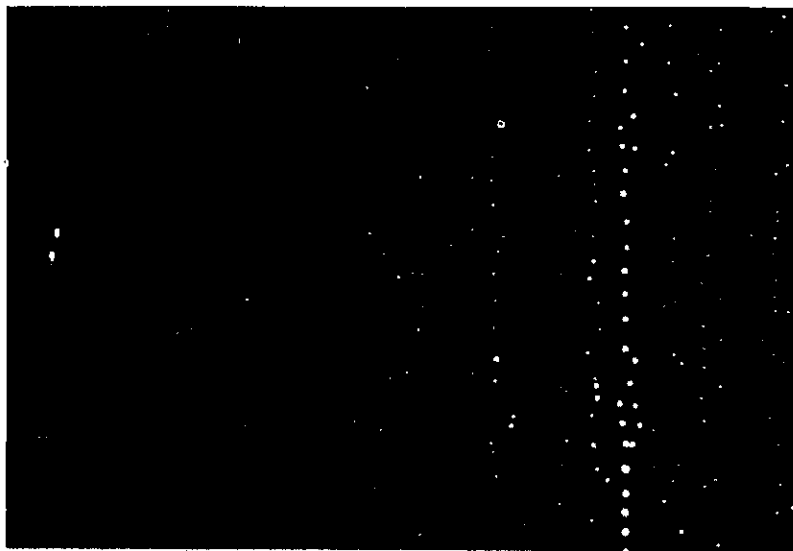
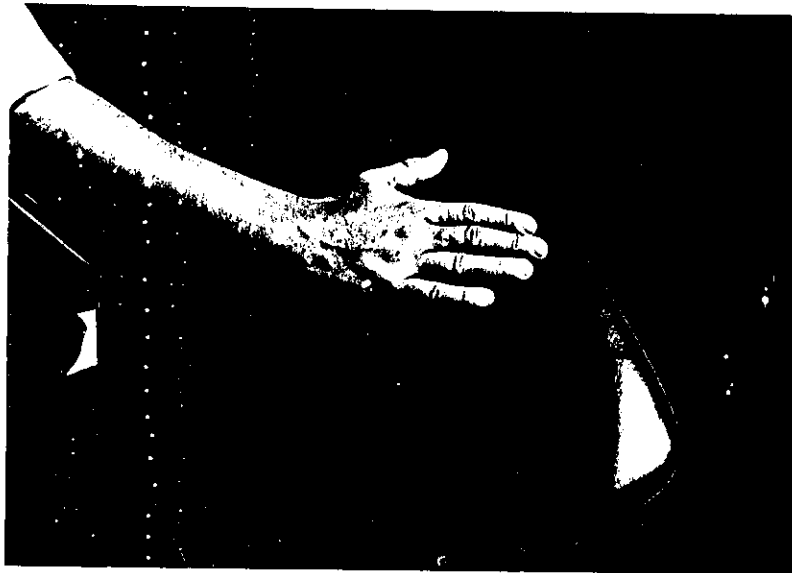


Fig. (6): Show 2 patches of focal vitiligo.
(a) Before treatment.
(b) After treatment.

(a)



(b)

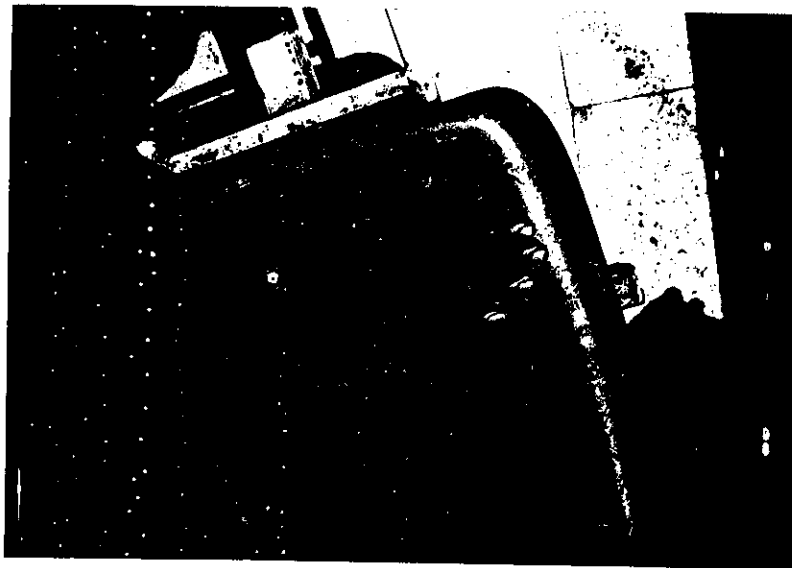


Fig. (7): Show 3 small patches of focal vitiligo.

(a) Before treatment.

(b) After treatment.

(a)



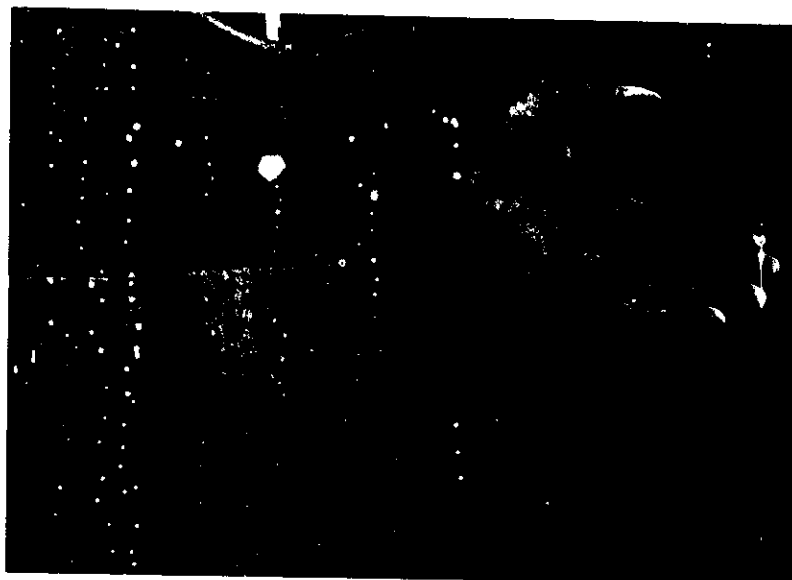
(b)



Fig. (8): Show one large patch of focal vitiligo.

(a) Before treatment.

(b) After treatment.



(a)



(b)

Fig. (9): Show 3 large patches of focal vitiligo
(a) Before treatment.
(b) After treatment.



(a)



(b)

Fig. (10): Show one large patch of focal vitiligo on hair line
(a) Before treatment.
(b) After treatment.

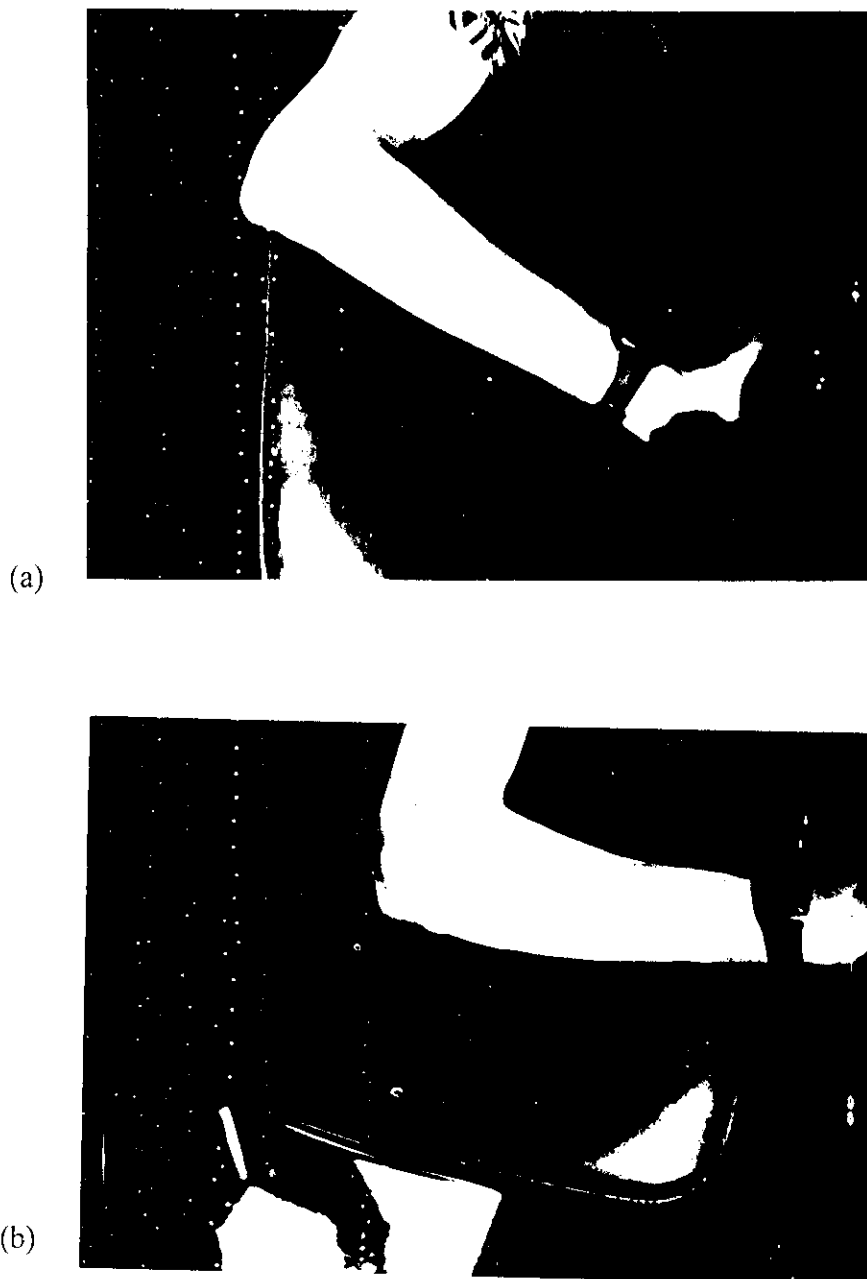


Fig. (11): Show one large patch of generalized vitiligo
(a) Before treatment.
(b) After treatment.



(a)



(b)

Fig. (12): Show one patch of focal vitiligo periauricular
(a) Before treatment.
(b) After treatment.

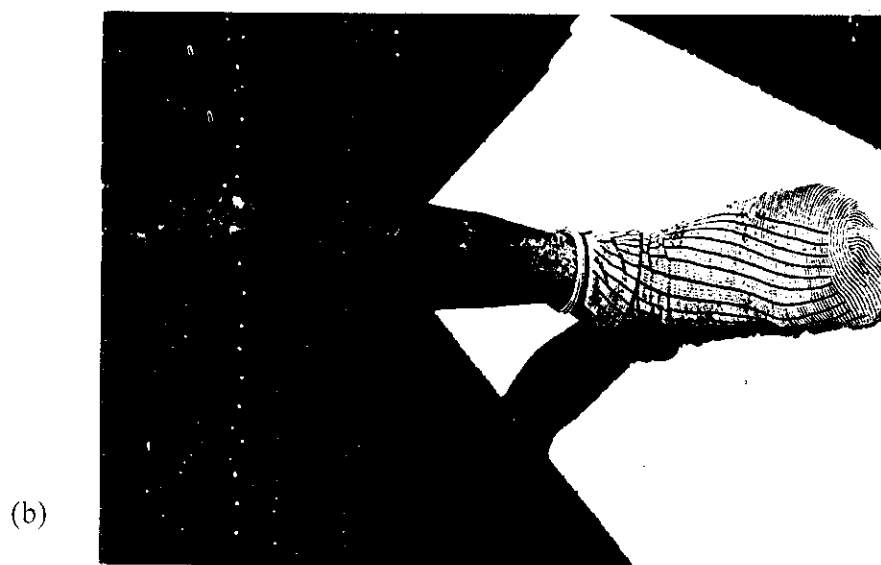


Fig. (13): Show one patch of focal vitiligo
(a) Before treatment.
(b) After treatment.



(a)



(b)

Fig. (14): Show 3 patches of focal vitiligo
(a) Before treatment.
(b) After treatment.



(a)



(b)

Fig. (15): Show large patch of focal vitiligo on frontal area
(a) Before treatment.
(b) After treatment.

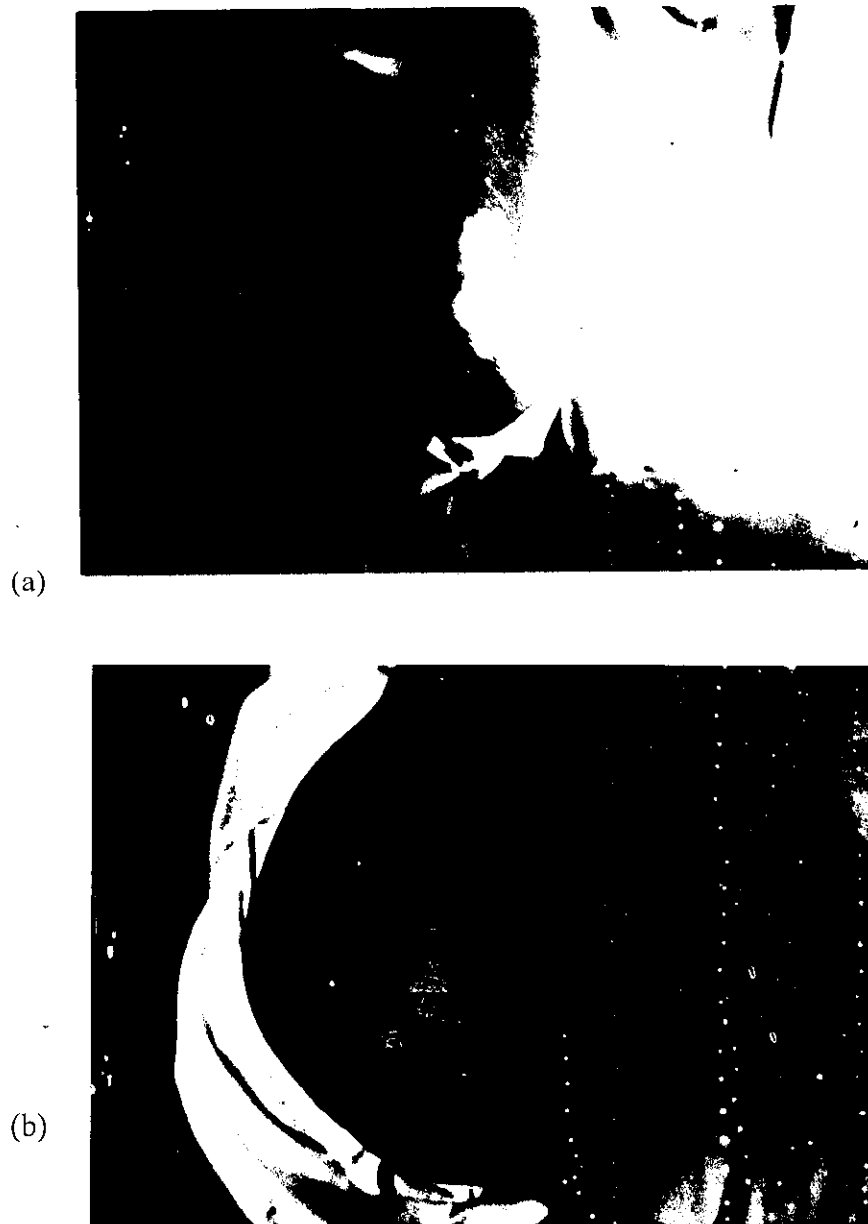


Fig. (16): Show control case of vitiligo.

(a) Before treatment.

(b) After treatment.

1- Dermabrasion with application

2- Dermabrasion alone.

3- Application without dermabrasion

(a)



(b)



Fig. (17): Show a control case of focal vitiligo

(a) Before treatment.

(b) After treatment.

- 1- Dermabrasion with application
- 2- Dermabrasion alone.
- 3- Application without dermabrasion

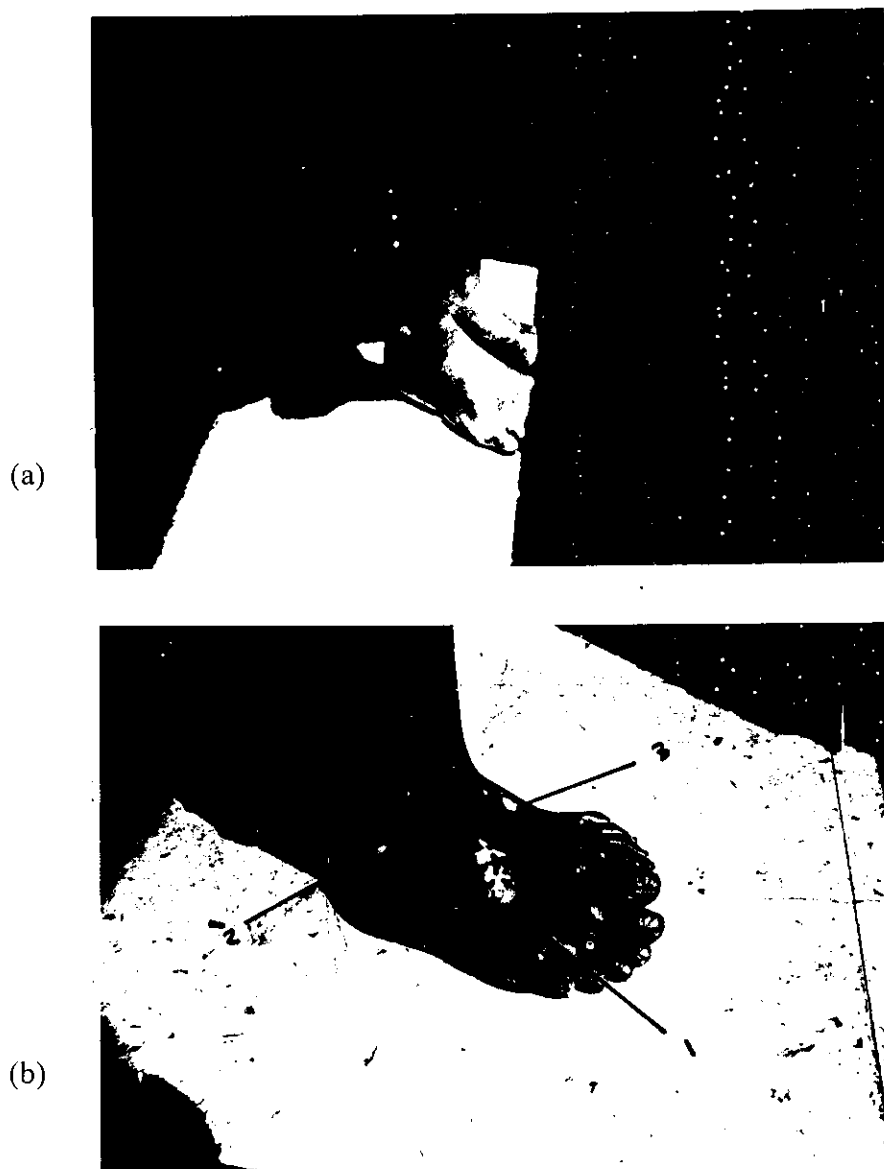


Fig. (18): Show a control case of vitiligo.

(a) Before treatment.

(b) After treatment.

1- Dermabrasion with application

2- Dermabrasion alone.

3- Application without dermabrasion