

## A CLINICAL STUDY OF VITILIGO

R. C. SARIN \* AND AJIT SINGH KUMAR †

### Summary

Clinical patterns and manner of presentation of vitiligo in 771 cases have been studied. Both the sexes were equally affected. The disease in two-third of cases had its onset at or before the age of twenty years. Multicentric onset was uncommon (1.0%). Legs were the most common initial sites involved (15.7%). Spontaneous repigmentation occurred in 9.6%. Family history was positive in 8.6%. In two-third of cases the pattern was multifocal. Vitiligo areata was not uncommon (seen in 21.4% of cases).

Leucoderma is the general term applied to decreased melanin pigmentation of skin. Vitiligo is the commonest type of leucoderma. It implies primary depigmentation of integument with well defined usually hyperpigmented borders. It is not present at birth, but develops later in life. In vitiliginous skin there is no structural change except for the loss of melanin pigment<sup>1</sup>. However, electron microscopy has revealed certain anatomical changes in the basal melanocytes<sup>2,3</sup>. This disease is most common during the period of active growth<sup>4</sup>. Intestinal parasitism is common in these patients, which is thought to alter the proper absorption of the constituents necessary for pigmentation<sup>5,6</sup>. Hereditary incidence has been reported in 10 to 40 percent of cases<sup>4,7,8,9</sup>.

The present study has been undertaken to find out clinical pattern and other features in patients with vitiligo in this part of the country.

\* Professor & Head

† Registrar

Department of Skin and S.T.D.,  
Medical College/Shri Guru Tegh Bahadur  
Hospital, Amritsar

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### Material and Method

Patients with vitiligo presenting in the skin and S. T. D. Department of S. G. T. B. Hospital, Amritsar, during the year 1959 to 1968 were referred to the leucoderma clinic run once a week. In the clinic a careful history was taken and meticulous examination of each case carried out and recorded on a special proforma. Routine investigations such as haemoglobin estimation, total and differential leucocytes counts, urine and stools examination were carried out.

### Age and sex

Among 771 cases studied 48% (370 cases) were females and 52% (401 cases) were males. Their ages at the time of onset of vitiligo ranged from 2 years to 75 years. 82.9% of cases (639 cases) were below or of 30 years of age (Table I).

### Duration of illness and status of disease

The disease was stationary in 28.6% (221 cases) and progressive in 71.4% (550 cases). The duration of illness was less than 2 years in 72.5% (559 cases), of which 72.2% (404 cases)

TABLE I  
Showing age and sex distribution at the onset of disease

Sex	Age in Years								Total
	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	
Female	146	108	56	28	22	8	2	0	370
Male	121	139	69	46	15	7	2	2	401
Total	267	247	125	74	37	15	4	2	771

were having progressive disease. The duration of illness ranged between one week and 55 years before seeking medical advice (Table II).

TABLE II  
Showing duration and status of disease

Status	Duration in years			Total
	Less than 2	2-10	More than 10	
Stationary	155	46	20	221
Progressive	404	114	32	550
Total	559	160	52	771

**Onset**

Multicentric onset was seen in 8 cases (1%) and in the rest it was unicentric. The most common initial site involved was the leg, this being seen in 121 cases (15.7%). (Table III.)

trauma (9 cases), superficial folliculitis (9 cases), itching (5 cases) and superficial burns (4 cases). Allergic disorders were present in 5 cases viz. urticaria (2 cases), chronic sinusitis (2 cases) and nasobronchial allergy (1 case). Chronic infections, such as, tonsillitis (9 cases) and chronic suppurative otitis media (1 case), were seen in 10 cases. Diabetes mellitus was detected in 2 cases.

**Spontaneous cure**

In 74 cases (9.6%) a history of spontaneous cure in some of the lesions at one or other stage of illness was obtained. Such lesions were present on trunk (21 cases), face (19 cases), lower extremity (18 cases), upper extremity (13 cases) and neck (3 cases).

TABLE III  
Showing initial sites involved in order of frequency

Region affected	No. of cases	Percentage	Maximum affection	
Lower extremities	250	32.4	Legs (121 cases)	48.4%
			Foot (70 cases)	28.0%
			Eye lids (53 cases)	25.7%
Face	106	13.6	Lips (48 cases)	23.3%
			Chest (45 cases)	29.4%
Trunk	153	19.9	Abdomen (43 cases)	28.1%
			Iliac Crest (33 cases)	21.6%
			Hands (53 cases)	57.0%
Upper extremities	93	12.1	Forearms (20 cases)	21.7%
Neck	28	3.6		
Genitalia	17	2.2	Male (16 cases)	94.1%
Scalp	16	2.1		
Multicentric	8	1.0		

**Associated and preceding disorders**

A history of preceding skin disorders was present in 44 cases (5.7%). These were dermatitis (17 cases),

**Family history**

History of relatives suffering from vitiligo was obtained in 66 cases (8.6%) — on maternal side (18 cases),

paternal side (26 cases), among siblings (20 cases) and in children (2 cases).

### Clinical features

The disease was multifocal in 67.5% (521 cases) and unifocal in 31.5% (250 cases) of the cases studied (Table IV).

TABLE IV  
Showing patterns of vitiligo

Pattern	No. of cases	Percentage
<b>Multifocal:</b>		
Vitiligo acrofacialis	296	38.4
Vitiligo vulgaris	225	29.1
<b>Unifocal:</b>		
Vitiligo areata	165	21.4
Vitiligo Zosteriformis	85	11.1

Hyperpigmented borders were observed in 267 cases (34.5%) leucotrichia in 189 cases (24.5%). Irritant areas such as waist line were involved in 42 cases (5.4%).

### Routine investigations

Haemoglobin estimation was carried out in 639 cases. It ranged between 6.5 and 15.8 gm%. In 329 cases haemoglobin was between 10 and 12 gm% and in 257 cases it was more than 12 gm%. In 53 cases (6.9%) it was less than 10 gm%.

Urine examination was done in 659 and in only 2 cases was glycosuria detected. In these, diabetes mellitus was later confirmed by blood sugar estimations.

Routine stool examination was carried out in 683 cases. In 125 cases (18.3%) pathogenic parasitic infestation was detected. In 100 cases (12.9%) non-pathogenic parasitic infestation was present (Table V).

### Discussion

Vitiligo differs in many aspects in this part of the country. Though females are thought to be affected more<sup>7,10</sup>

among Indian patients both sexes are equally affected<sup>4,8</sup> as it has also been observed in the present series.

TABLE V  
Showing incidence of parasitic infestation

Parasites	No. of cases	Percentage
<b>Pathogenic:</b>		
Ent. histolytica	81	11.8
Giardia lamblia	54	8.3
Hook worm	43	6.3
Round worm	7	1.0
Thread worm	4	0.6
Cellular exudate	3	0.4
<b>Non-pathogenic:</b>		
Iod. butschlii	98	14.4
E. Coli	58	8.5
H. nana	12	1.7

Vitiligo is often progressive for some time and after reaching certain dimensions may remain stationary for indefinite periods. It attacks people during the period of their active growth. In more than 50 percent of cases it develops before the age of 20 years<sup>4,7,9</sup>. In the present series the disease started before the age of 20 years in two-thirds of cases. Multicentric onset has been observed in only 1% of cases though reported by other workers in 25% cases<sup>7,8</sup>. No part of the skin is immune to vitiligo, though depigmentation tends to develop more in skin exposed to sunlight or in warmer parts of the body<sup>7,9</sup>. Regional distribution among Indian patients differs from those in western countries. Legs are the most common initial sites of involvement and in order of frequency the regions which get involved are lower extremities, face, trunk and upper extremities<sup>4,8</sup>. In the western countries backs of hands, forearms, face and neck are reported to be the most frequently involved sites<sup>7,9</sup>. Spontaneous repigmentation in affected areas was observed in 9.6% cases whereas Lerner<sup>7</sup> has reported repigmentation in 44% of cases.

Vitiligo may follow acute stress or existing disease process<sup>8</sup>. It may be associated with organ specific autoimmune disorders such as diabetes, pernicious anaemia, addison's disease, thyroid disease or alopecia areata<sup>9,10</sup>. Without doing G. T. T. in all the patients, incidence of diabetes cannot be determined.

Inheritance in vitiligo may be determined by autosomal dominant gene of variable penetrance<sup>9</sup>. In the present series a positive family history was present only in 8.6% of cases. Familial incidence has been reported in 10-40% of cases by various authors<sup>4,7,8,9</sup>.

Familial incidence cannot be determined by history alone. Higher incidence may have been obtained if family members were examined.

Vitiligo based on morphological character may be grouped as multifocal and unifocal. In multifocal pattern the lesions are bilateral and closely symmetrical. This may be further subclassed as vitiligo vulgaris when lesions are scattered all over the body and vitiligo acrofacialis when the lesions are present in the peripheral parts of limbs and face. In unifocal vitiligo the lesions may be distributed in a segment when it is called vitiligo zosteriformis, or present as one or two isolated lesions remains stationary for variable periods when it is called vitiligo areata. Dutta et al<sup>8</sup> have reported incidence of various types of vitiligo to be, 75% of multifocal vitiligo with equal distribution of cases between vitiligo vulgaris and vitiligo acrofacialis, 20% of vitiligo zosteriformis and 4 to 5% of vitiligo areata. In our study multifocal vitiligo was observed in 67.5% of cases of which 56.8% had vitiligo acrofacialis. Vitiligo areata comprised 21.4% of cases. Further,

leucotrichia which has been reported to be present in nearly half of the cases<sup>8</sup>, was present only in a quarter of our cases.

Pathogenic intestinal parasitic infestation was observed in 18.3% of cases and though it has been conjectured that such infestation hampers the absorption of proper nutrients necessary for the production of the pigment<sup>5,6</sup> it is futile to attach any importance to it, especially so when there have been no signs or symptoms of deficiency. Besides the incidence of such intestinal infestations in the population at stake is high.

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