Clinico-Epidemiological Profile of Vitiligo in Pediatric Age Group in a Tertiary Care Centre: An Observational Study

Pawan Singh¹, Anand J Asia², Rachana A Laut³, Girish R Ambade⁴
Department Of Dermatology, Venereology and Leprosy, Government Medical College, Akola, M.S., India, 444001

Corresponding Author: Pawan Singh

Abstract - Vitiligo is an acquired often progressive disorder of depigmentation characterised by circumscribed achromatic macules often associated with leukotrichia. It affects all races worldwide with highest incidence in India[3-14%] and Mexico.¹ Lesions of vitiligo are asymptomatic and have no effect on general health of an individual, still it is of great concern because of its psychosocial impact on life. Due to its appearance it is often confused with Leprosy[Kushta rog]. Vitiligo may present anytime in life, including the neonatal period and childhood. Childhood vitiligo shows female preponderance, and presents more in segmental distribution and rarely associated with autoimmune and endocrine disorders.²³ The prevalence of vitiligo in pediatric age group has been quoted to be around 25% of vitiligo patients of all ages.⁴,⁵,⁶,⁷

Onset of the disease is usually after 10 years of age. The Mean age at onset of childhood vitiligo in an Indian study done by Handa S Dogra S was 6.2 years;⁷ An Indian study done by Handa S Dogra S ⁷ a statistically significant difference in the occurrence of vitiligo among boys and girls was noted, such difference has not been documented in other studies. Family members of the affected children have a higher incidence of vitiligo and other autoimmune disorders compared to controls.⁹ Positive family history in childhood vitiligo varies between 11%⁴ and 46%¹⁰ in various studies.⁴,⁵,¹⁰ Pajvani et al⁶ have reported an earlier onset of vitiligo in children in whom family history of the disease, leukotrichia or other autoimmune disorders were present. In children with focal and segmental disease, family history of vitiligo or other autoimmune disorders is usually negative.²¹ In India and perhaps elsewhere also men, women and children with vitiligo face severe psychological and social problems

Thus vitiligo is an important skin disease having major impact on the quality of life of patients suffering from vitiligo. Appearance of skin can condition an individual self-image, and any pathological alteration can have psychological consequences.¹² Many vitiligo patients feel distressed and stigmatized by their condition. Most patients of vitiligo report feelings of embarrassment, which can lead to a low self-esteem and social isolation.¹² Occurrence of vitiligo on face and extremities and resistance to treatment can cause embarrassment, anger sometimes progressing to depression and suicidal attempts.¹³,¹⁵

Patients with vitiligo are very sensitive to the way other perceives them and they will often withdraw, because they anticipate being rejected. Sometimes, strangers and even close friends can make extremely hurtful and humiliating comments.

DOI: 10.9790/0853-1809070612
Children with vitiligo usually avoid sport or restrict such activities. Children often lose vital days from school. Parents of children with vitiligo may have to take time off their work to regularly accompany them for hospital appointments. Children with vitiligo deal with the disease well or be devastated by it, often depending on the attitude of their parents, siblings, relatives, teachers, friends, baby sitters etc. 

FOCAL VITILIGO

MUCOSAL VITILIGO

SEGMENTAL VITILIGO

ACRAL VITILIGO

TRICHRome VITILIGO

VITILIGO UNIVERSALIS
II. Aim And Objectives

To study clinical and epidemiological profile of vitiligo in pediatric age group of 1-12 years in a tertiary care centre during period January 2018 to June 2019.
1- To assess incidence of vitiligo in patients between age group 1-12 years in Out Patient Department of Department of DVL at a tertiary care centre.
2- To assess age and sex distribution of patients of pediatric vitiligo.
3- To assess clinical type of vitiligo

III. Material And Methods

Study design - Prospective observational study
Place of study - Tertiary care centre located in Maharashtra State, India
Duration of study - 1.5 years [January 2018 to June 2019]
Inclusion criteria : All clinically diagnosed patients of vitiligo less than 12 years of age.
Exclusion criteria: 
a- Other hypopigmentary and depigmentary disorders.
Method : All consecutive clinically diagnosed patients of vitiligo below 15 years of age fulfilling inclusion criteria were enrolled in study after taking valid written informed consent.
On 1st visit demographic profile like age, sex, socioeconomic status, education , detailed history about duration of disease, family history, presence of other autoimmune disorders/other dermatoses was taken and recorded in pre-designed proforma.
General, systemic and cutaneous examination was done and diagnosis of vitiligo was made clinically.
Routine blood investigations and thyroid profile were done.
Data was entered in Microsoft Excel and analysed statistically

IV. Observation And Result

1- Total vitiligo patients = 148, patients between 1-12 years of age = 51
Percentage of patients between 1-12 years = 34%

2- Sex distribution

<table>
<thead>
<tr>
<th>SEX NO.</th>
<th>NO. OF PATIENTS</th>
<th>TOTAL NO.</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MALE</td>
<td>21</td>
<td>51</td>
<td>41.1%</td>
</tr>
<tr>
<td>FEMALE</td>
<td>30</td>
<td>51</td>
<td>58.9%</td>
</tr>
</tbody>
</table>

Table 1 : SEX RATIO

3- Age distribution

<table>
<thead>
<tr>
<th>AGE GROUP</th>
<th>NO. OF PATIENTS</th>
<th>TOTAL NO.</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LESS THAN 4 YEARS</td>
<td>7</td>
<td>51</td>
<td>13.7%</td>
</tr>
<tr>
<td>4-8 YEARS</td>
<td>16</td>
<td>51</td>
<td>31.4%</td>
</tr>
<tr>
<td>8-12 YEARS</td>
<td>28</td>
<td>51</td>
<td>54.9%</td>
</tr>
</tbody>
</table>

TABLE 2: AGE DISTRIBUTION
4- Duration of disease

<table>
<thead>
<tr>
<th>DURATION</th>
<th>NO. OF PATIENTS</th>
<th>TOTAL NO.</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LESS THAN 6 MONTHS</td>
<td>9</td>
<td>51</td>
<td>17.6</td>
</tr>
<tr>
<td>6 MONTH-1 YEAR</td>
<td>14</td>
<td>51</td>
<td>27.5</td>
</tr>
<tr>
<td>MORE THAN 1 YEAR</td>
<td>28</td>
<td>51</td>
<td>54.9</td>
</tr>
</tbody>
</table>

TABLE 3: DURATION OF DISEASE

5- Family history of vitiligo was found in 5 patients
Incidence of positive family history = 9.8%
6. Presence of other autoimmune diseases
   a. Thyroid disorders = 3 [all hypothyroid]
   b. Idiopathic Thrombocytopenic Purpura [ITP] = 1
   Total = 4 out of 62

7. Clinical type of vitiligo

<table>
<thead>
<tr>
<th>SN. NO.</th>
<th>TYPE</th>
<th>NO. OF PATIENTS</th>
<th>TOTAL NO.</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-LOCALISED</td>
<td>FOCAL</td>
<td>14</td>
<td>51</td>
<td>27.6</td>
</tr>
<tr>
<td></td>
<td>SEGMENTAL</td>
<td>3</td>
<td>51</td>
<td>5.9</td>
</tr>
<tr>
<td></td>
<td>MUCOSAL</td>
<td>1</td>
<td>51</td>
<td>1.9</td>
</tr>
<tr>
<td>2-GENERALISED</td>
<td>VULGARIS</td>
<td>26</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>ACROFACIAL</td>
<td>4</td>
<td>51</td>
<td>7.8</td>
</tr>
<tr>
<td>3-UNIVERSAL</td>
<td></td>
<td>2</td>
<td>51</td>
<td>3.9</td>
</tr>
<tr>
<td>4-TRICHROME</td>
<td></td>
<td>1</td>
<td>51</td>
<td>1.9</td>
</tr>
</tbody>
</table>

**TABLE 4: CLINICAL TYPE**
V. Discussion And Conclusion

Childhood vitiligo is a common dermatological disorder. It is to be differentiated from other causes of hypo or depigmentation. In many cases, familial aggregation of the disease is seen and other autoimmune disorders may be associated. Limited body surface area involvement is usual in this age group.

In our study, 34% of patients belong to age group of 1-12 years; overall incidence of pediatric vitiligo ranges from 16% to 26% as observed in various studies by Hu Z et al,[24.1%]4, Cho S et al,[16%]5, Jaisankar TJ et al,[26%]6, Hann SK et al,[23.3%]7

Handa S, Dogra S observed female preponderance in their study which supports similar finding in present study [58.9%] Most patients presented after age of 8 years[54.9%] Hann et al[8] have reported disease onset below 10 years of age among 41.3% of their series of patients with SV. In a Chinese study on childhood vitiligo (n = 541), eight children had skin lesions present at birth (focal 7, acrofacial 1).

Majority of patients [54.9%] had more than 1 year duration of disease.

Presence of family history was 9.8% in our study which was found to be 11% according to Hu Z et al[4] and 46% according to Prcic S et al[10].

<table>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FAMILY HISTORY</td>
<td>9.8%</td>
<td>11%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>46%</td>
</tr>
<tr>
<td>OTHER AID</td>
<td>7.8%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.3%</td>
<td>-</td>
</tr>
</tbody>
</table>

Concomitant presence of other autoimmune diseases was 7.8%, which was 1.3% according to Hann SK et al[7]. Though mentioned in most of the literature that associated autoimmune diseases are rare in pediatric vitiligo but in present study 3 patients had hypothyroidism and 1 patient had ITP.

Most common clinical type was vitiligo vulgaris type of generalised vitiligo [51%] as observed in various other studies like Hu Z et al[4], Cho S et al[5], Hann SK et al[7], Prcic S et al[10]. It was followed by focal vitiligo[27.6%], acrofacial[7.8%], segmental [5.9%], whereas vitiligo universalis and trichrome were observed in 3.9% and 1.9% of patients respectively.

Such studies with large sample size and comparative variables are needed to confirm results of our study. It may help in deciding the therapeutic options to achieve best results with minimal side effects as well as relieving patients' and parents' psychological distress.

References


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DOI: 10.9790/0853-1809070612 www.iosrjournals.org 12 | Page