

## ORIGINAL ARTICLE

### Assessment of cases of vitiligo- A clinical study

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#### ABSTRACT:

**Background:** Vitiligo is an acquired depigmentary condition caused by inactivation or destruction of melanocytes in epidermis and hair follicle. The clinically characteristic symptoms of the vitiligo are pale or milk-white macules or patches due to the selective destruction of melanocytes. The present study was conducted to assess cases of vitiligo. **Materials & Methods:** The present study was conducted on 276 patients of vitiligo of both genders. In all subjects, a careful clinical examination was done. Type of vitiligo was evaluated. **Results:** Out of 276 patients, males were 156 and females were 120. Common type of vitiligo was segmental seen in 72, non-segmental in 116 and undetermined in 48. The difference was significant ( $P < 0.05$ ). **Conclusion:** Vitiligo constitutes important dermatological disease especially in India. Authors found that case of vitiligo is not uncommon nowadays. Common type reported was segmental, non-segmental and undetermined. Vitiligo differs substantially in various clinical aspects.

**Key words:** Segmental, Undetermined, Vitiligo.

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#### INTRODUCTION

Vitiligo refers to an acquired idiopathic depigmentary condition. It is characterised by completely depigmented milky white macules of varying sizes and shapes. They occur on the skin in different parts of the body and sometimes also on the mucous membranes. Besides loss of colour there is no other structural changes. This disorder does not result in restriction of capacity to work or expectancy of life, but it causes cosmetic disfigurement leading to psychological trauma to the patients. The reported incidence of vitiligo in various dermatological clinics now in India varies from 0.5% to 1%.<sup>1-4</sup>

In recent years, considerable progress has been made in our understanding of the pathogenesis of vitiligo which is now clearly classified as an autoimmune disease. Vitiligo is often dismissed as a cosmetic problem, although its effects can be psychologically devastating, often with a considerable burden on daily life.

In 2011, an international consensus classified vitiligo into two major forms: nonsegmental vitiligo (NSV) and segmental vitiligo (SV).<sup>5</sup> The term vitiligo was defined to designate all forms of NSV (including acrofacial, mucosal, generalized, universal, mixed and rare variants). Distinguishing SV from other types of vitiligo was one of the most important decisions of the consensus, primarily because of its prognostic implications.

The present study was conducted to assess cases of vitiligo.

#### MATERIALS & METHODS

The present study was conducted in the department of Dermatology. It comprised of 276 patients of vitiligo of both genders. All were informed regarding the study.

General information such as name, age, gender etc. was recorded. In all subjects, a careful clinical examination was done.

All depigmented patches observed since birth as well as acquired depigmented patches due to infections, physical trauma, chemical injury, burns, nutritional deficiency, inflammatory dermatosis, and drugs were excluded.

Type of vitiligo was evaluated. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

#### RESULTS

**Table I Distribution of patients**

| Total- 276 |       |         |
|------------|-------|---------|
| Gender     | Males | Females |
| Number     | 156   | 120     |

Table I shows that out of 138 patients, males were 78 and females were 60.

Graph I Distribution of patients

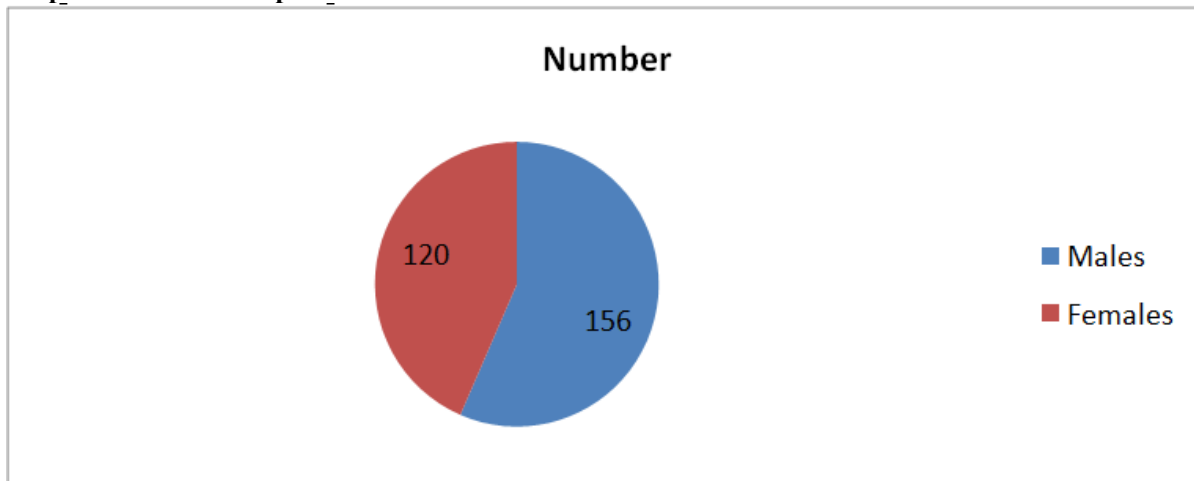
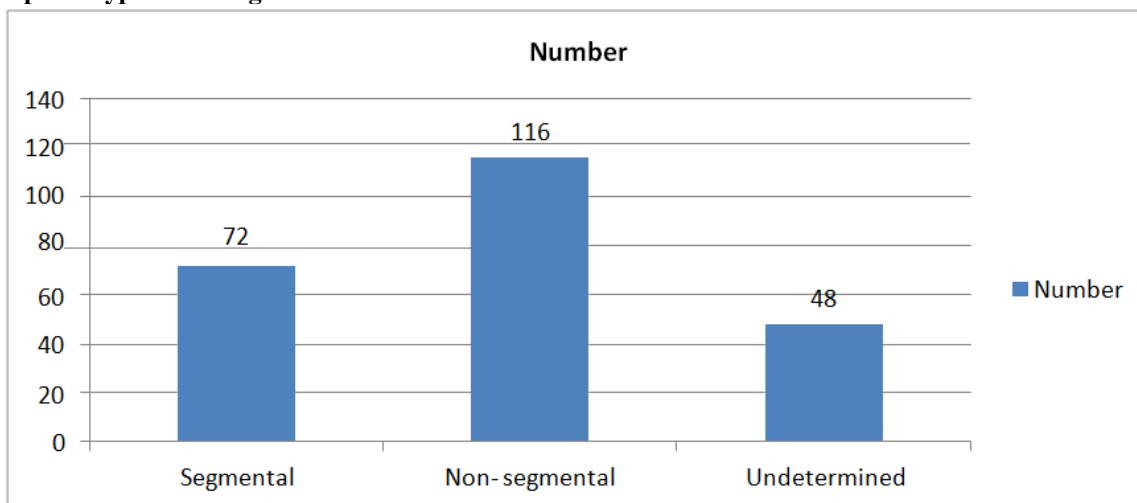


Table II Types of Vitiligo

| Types          | Number | P value |
|----------------|--------|---------|
| Segmental      | 72     | 0.02    |
| Non- segmental | 116    |         |
| Undetermined   | 48     |         |

Table II, graph I shows that common type of vitiligo was segmental seen in 72, non- segmental in 116 and undetermined in 48. The difference was significant (P< 0.05).

Graph II Types of Vitiligo



**DISCUSSION**

The prevalence of vitiligo is high in India, varying in range of 0.46-8.8%. The different ethnic backgrounds of population residing in different geographic region with different environmental condition may contribute to the wide variation in prevalence of vitiligo in India.<sup>6</sup> Etiology is unknown and the several pathogenetic hypotheses do not account for the entire spectrum of the disease. A positive family history for vitiligo is reported. Actually, family clustering of cases is not uncommon, since about 20% of patients have at least one affected first-degree relative, with a non-Mendelian pattern suggestive of multifactorial, polygenic inheritance.<sup>7</sup> The present study was conducted to assess cases of

vitiligo.

In this study, out of 276 patients, males were 156 and females were 120. Guan et al<sup>8</sup> in their study, a total of 103 studies were eligible for inclusion. The pooled prevalence of vitiligo from 82 population- or community-based studies was 0.2% (95%CI: 0.1%–0.2%) and from 22 hospital-based studies was 1.8% (95%CI: 1.4%–2.1%). A relatively high prevalence of vitiligo was found in Africa area and in female patients. For population- or community-based studies, the prevalence has maintained at a low level in recent 20 years and it has increased with age gradually. For hospital-based studies, the prevalence has showed a decreased trend from 60s till now or from young to

old. No significant publication bias existed in hospital-based studies ( $t = 0.47$ ,  $P = 0.643$ ), while a significant publication bias existed in population- or community- based studies ( $t = 2.31$ ,  $P = 0.026$ ).

We found that common type of vitiligo was segmental seen in 72, non- segmental in 116 and undetermined in

48. Shameer et al<sup>9</sup> studied 103 patients with vitiligo and 103 healthy sex and age matched controls. Serum zinc levels were measured in these two groups using atomic absorption spectrophotometry and compared with each other. The mean serum zinc level was 92.1 mcg/dl in the focal vitiligo, 81.3 mcg/dl in the generalized vitiligo, and 91.8 mcg/dl in the control group. A significant difference in serum zinc levels was observed between the patients with generalized vitiligo and the controls. Lower serum zinc levels were also correlated with longer duration of the disease. Furthermore, a negative relationship was found between serum zinc level and age of patients with vitiligo.

Genetic factors play an important role in manifestation of vitiligo. Though various studies indicate involvement of genetic factors, the patterns are not consistent with single locus Mendelian transmission, but appear to be polygenic. One hypothesis postulates that recessive alleles at multiple unlinked autosomal loci interact epistatically in pathogenesis of vitiligo.<sup>3</sup>

In general, the prevalence of vitiligo showed a relatively decreased trend with increase in the times. Especially, it has remained at a low level in recent two decades in both population- or community-based studies and hospital-based studies. The association between vitiligo and its autoimmune diseases, such as autoimmune thyroid diseases, psoriasis, pernicious anemia, Addison's disease et al has been frequently described in the literatures. As vitiligo may accompany with other diseases or disorders, we assume that the decreasing prevalence may be beneficial from development of diagnostic tools or improvement of screening programs or therapeutic methods of vitiligo- related diseases or disorders.<sup>10</sup>

## CONCLUSION

Vitiligo constitutes important dermatological disease especially in India. Authors found that case of vitiligo is not uncommon nowadays. Common type reported was segmental, non- segmental and undetermined. Vitiligo differs substantially in various clinical aspects.

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