



INTRODUCTION TO VITILIGO AND ITS TREATMENT: A REVIEW

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ABSTRACT

The present review includes the study of vitiligo, its different types and treatments available into the market. Vitiligo is a skin disorder in which white patches occurs on the skin may be in the form of lesions or on the whole body. Vitiligo can be triggered by stress to the melanin pigment-producing cells of the skin, the melanocytes. Novel approaches to promote repigmentation in vitiligo are being investigated and may yield effective, long-lasting therapies.

Introduction

Vitiligo is a disease that causes the loss of skin color in spots. It can affect the skin on any part of your body. It may also affect hair and the inside of the mouth. Usually, the color of hair and skin is determined by melanin. Vitiligo occurs when the cells that produce melanin die or stop functioning. Vitiligo affects people of all skin types, but it may be more noticeable in people with darker skin. Vitiligo normally marks about 1% of the world residents. It does not embrace racial, sexual or regional differences amongst the people. Certain intelligences propose that incidence of Vitiligo in India, Egypt and Japan is higher. It ranges from 1.25% to 6% of the population. The most communal type is non-segmental generalized vitiligo (referred to as vitiligo), which presents with extensively dispersed, typically symmetric, as well as progressive lesions. Vitiligo has an articulate impact on the physical as well as mental health of patients, including loss of skin photo protection, compromised cutaneous immunity, as well as an appreciable decrease in quality of life that is unswervingly correlated with the early age of onset.¹⁻³

Types of Vitiligo

There are three major types of vitiligo are as follows:

- Segmental Vitiligo
- Non-Segmental Vitiligo
- Mixed Vitiligo



- **Segmental Vitiligo**

Segmental vitiligo starts as well as stays in one side of body. It is an autoimmune disease. It is clearer in early age groups, affecting about 30 percent of children diagnosed with vitiligo. It responds well to topical treatment.

- **Non-Segmental Vitiligo**

It is an autoimmune disease as well as often mirrors on both sides of the body. It is most common type of vitiligo observed in 90% cases. They often appear on skin that is commonly exposed to the sun, such as the face, neck, and hands.

- **Mixed Vitiligo**

Mixed Vitiligo intersection of both types in the rare cases where segmental becomes non-segmental.^{1,4}

Symptom and Causes

The elementary symbol of vitiligo is loss of skin color. Discoloration first shows on sun-exposed areas like hands, lips, arms and face.

Vitiligo Signs Include:

- Occasional loss of skin color
- Premature whitening of the hair on your scalp, eyelashes, eyebrows or beard
- Loss of color in the tissues that line the inside of your mouth and nose (mucous membranes)
- Change in color of the inner layer of the eyeball (retina)
- Hyperpigmentation at the edges of the discolored patches on the skin

Vitiligo can start at any age, nevertheless frequently seems before age 20. It is tough to predict how your diseases will growth. Sometimes the patches stop forming without treatment. In most cases, pigment loss suppers and ultimately involves most of your skin. Hardly, the skin gets its color back.

Causes

Vitiligo occurs when the melanocytes die or stop functioning. Melanocytes are nothing but cells producing melanin. It is pigment that gives color to eye skin and hair.

Vitiligo may cause due to:

- A disorder in which your immune system attacks and destroys the melanocytes in the skin.
- Family history (heredity).
- A trigger event, such as sunburn, stress or exposure to industrial chemicals.
- Stressful events
- A virus
- Vitiligo is not contagious. One person cannot fasten it from alternative.^{4,5}

Diagnosis and Treatment

Medical History and Exam

If your doctor respondents you have vitiligo, he or she will inquire about your medical history, scrutinize you and try to rule out other medical problems, such as dermatitis or psoriasis. He or she can use a special lamp to shine ultraviolet light onto the skin to determine whether you have vitiligo.

Skin Biopsy and Blood Draw

Your doctor may:

- Take a small sample (biopsy) of the affected skin.
- Draw blood for lab tests to look for underlying autoimmune conditions, such as anemia or diabetes.
- Wood's light is very useful to diagnose the vitiligo.⁵

Treatment

Many treatments are accessible to benefit restore skin color or even out skin tone. Results vary and are unpredictable. Some treatments have serious side effects. Sometimes doctor may recommend that, you first try improving the appearance of your skin by applying self-tanning products or makeup. Even if treatment is successful for a while, the results may not last or new patches may appear.

No drug can stop the process of vitiligo. However, some drugs used alone or with light therapy, can help restore some skin tone.

- Use of corticosteroid cream
- Depigmentation
- Skin grafting
- Blister grafting
- Tattooing (Micro pigmentation)
- An arthritis drug - Tofacitinib citrate - has shown some promise. It inhibits Janus kinase, an enzyme that seems to be implicated in the etiology of vitiligo.
- Kapalbhati is helpful in the treatment of vitiligo.
- Photochemotherapy
- Piperine an alkaloid from black pepper show antivitamin activity.^{4,5,7}

Marketed Formulation

- Lukoskin used for treatment of vitiligo. It is an innovation by DRDO.
- Anti-vitiligo kit treatment by Dr. Ravish Kamal.
- Drug like methoxasalen, triosalen and posarlen are used in treatment of vitiligo with minimum side effects.
- Potent corticosteroids like betamethasone, valerate, triamcinolone and very potent corticosteroids like alobetasol, fluticasone propionate are helpful for repigmentation of skin.

Herbal Formulation Components

Following components have good properties and will used to treat vitiligo.

- Cucumis melo
- Ginkgo biloba
- Khellin
- Green tea Polyphenols
- Traditional Chinese Medicine (TCM)
- Capsaicin, Curcumin
- Picrorhiza kurroa^{8,9}

Recent Advancement In Treatment Of Vitiligo

- Depigmentation therapy using monobenzone is approved by the FDA.
- Minocycline, a broad-spectrum antibiotic, has also been evaluated in vitiligo owing to its anti-inflammatory, antioxidant, and immunomodulator properties.
- Afamelanotide, a longer-acting synthetic analogue of alpha melanocyte motivating hormone, has also shown promise in initial clinical studies. Through binding to the melanocortin-1 receptor, Afamelanotide may battle melanocortin system defects in vitiligo patients by stimulating melanocyte proliferation and melanogenesis.⁹

Conclusion

Vitiligo is a skin disorder in which devastation of melanocyte by different means happens. The overhead-deliberated treatments are existing to treat this disorder. Present medical besides surgical therapies for vitiligo, particularly when used in combination, have shown certain accomplishment in the stabilization and repigmentation of vitiligo.

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