



ROLE OF HERBAL MEDICINES IN VITILIGO MANAGEMENT – CURRENT STATUS & FUTURE PERSPECTIVES

Md Arif Jamal*¹, Amit Semwal², Ganesh Kumar³

Undergraduate, Assistant Professor, Professor

Department of Pharmacy

College of Pharmacy, Shivalik Campus, Dehradun, Uttarakhand, India

ABSTRACT

Vitiligo is a common depigmenting cutaneous condition of the skin. It impact on 0.5%-2% population of the world. In this condition, melanocytes are approx misplaced resulting in non-scaly, chalky-white tackles. It is a chronic autoimmune disease. The cause of vitiligo is unknown. Vitiligo is discussed as absence of epidermal pigmentation. There are three major causes or factors those are responsible for vitiligo. Pigmented pores and skin has many aberrant functions. Such as muted response to touch allergens, a phenomenon additionally visible in mice in which observed hypopigmentation condition. People who contain albinism with white epidermis then their skin shows same color as vitiligo, are more sensitive against carcinoma. People who suffer from vitiligo, in their white epidermis skin does not develop non-melanoma carcinoma. Vitiligo is unknown however the associated with immune device modifications genetic elements pressure or solar publicity. The remedy choice consists of mild therapy, surgery, topical medication, and cosmetics. Vitiligo is identified via way of method of tissue biopsy and blood test. It is a long-time period disease and it isn't always 100% curable. For this disease, chance elements are their own circle of relative records or special autoimmune diseases.

Keywords: Vitiligo, Melanocytes, Mild Therapy, Keratinocytes, Carcinoma.

INTRODUCTION

Vitiligo is a depigmenting pores and skin ailment that affects people of each age and ethnicity, worldwide. According to a have take a observe thru Ezzedine et al. (2015), vitiligo influences approximately 0.5% to 1% of the worldwide population, making it an exceptionally not unusual place. The situation is characterized via way of means of the lack of pores and skin pigmentation insure regions of the frame because of the dying or malfunctioning of the melanocytes – cells responsible for generating the pores and skin pigment melanin (Alkhateeb et al., 2012). The depigmented patches or spots can arise everywhere withinside the frame, consisting on the face, hands, feet, and trunk (Dwivedi & Laddha, 2012)[1]. The actual cause of vitiligo isn't always known. However, numerous hypotheses had been suggested, together with autoimmune, genetic, and environmental elements Alkhateeb et al., 2012). The autoimmune speculation proposes that the immune device mistakenly assaults and destroys the melanocytes. The genetic speculation indicates that sure genes can also additionally make individuals more at risk of the circumstance. Environmental elements can also additionally cause the onset or development of the disease, together with sunburn, chemicals, or stress [2]. While vitiligo isn't always a way of life-threatening situation, the psychosocial effect can be massive. Individuals with vitiligo are at risk of low self-esteem, depression, and social stigmatization (Dwivedi & Laddha, 2012). Cosmetic disfigurement will have an

effect on a person's great of life, particularly in cultures wherein physical appearance is a critical factor of social acceptance [3]. Fortunately, diverse treatments are to be had to control vitiligo, including topical cream, phototherapy, and surgery (Gawkeodger et al., 2008). However, no treatment for vitiligo exists at this time. The earlier analysis and remedy, the higher chance of preventing the disease development. In conclusion, vitiligo is a depigmenting pores and skin situation that affects a good sized part of the worldwide population. While the precise reason isn't always truly understood, the ailment's impact on a person's fine lifestyle is considerable. Management of the disorder may be challenging; early analysis, screening, and exposure to success interventions are critical to control the disease effectively [4].

CURRENT STATUS

The current status of herbal medicine for vitiligo is auspicious. Various herbal agents are available for this disease and show good activity against vitiligo. Like, *Psoralea corylifolia*, *Triticum aestivum* and *Ammi majus* have been used and shown effective activity against vitiligo. These herbal agents stimulate melanin production in skin due to this it helps in restore pigmentation in skin [5]. Other herbal medicine uses for vitiligo are *Ginkgo biloba*, *Turmeric* and *Green tea*. All are show anti-inflammatory properties and helps in to reduce inflammation of that area which is affected by vitiligo. Herbal medicines are beneficial in vitiligo. Its effectiveness depends on the severity of vitiligo condition. Before starting the treatment by herbal medicine check efficacy and safety of herbal medicine and consult to healthcare provider [6].

FUTURE PERSPECTIVES

In current years, many researcher efforts to invent and find out new herbal drugs or medicine for vitiligo treatment. It gained more attention of many researchers, as result of the popularity of the global significance of combating vitiligo disease. In the whole world vitiligo day has been observed on June 25 for awareness about vitiligo [7]. More studies and research are required for development, invention of herbal drugs and after the discovery of drug further need to much study for determining the safety, efficacy and optimal dosage of herbal drugs. Herbal medicines or drugs show fewer side effects than the synthetic one. Herbal medicine provide safe and effective alternative to vitiligo patients. Some patients who suffer from vitiligo are not able to buy synthetic medicines because of high cost but herbal medicines are lower cost medicine. Therefore, Patients can easily buy these medicines [8][9].

CLASSIFICATION OF VITILIGO

Vitiligo mainly classified into two types:

1. Non-Segmental Vitiligo
2. Segmental Vitiligo[10][11]

Sometimes, in rare cases it is possible that vitiligo affects the whole body of the people. If it happen. In that case, it is known as universal vitiligo [11]

- Non-segmental vitiligo

Non- segmental vitiligo also known as bilateral or generalized vitiligo. In this type of vitiligo symptoms often shows on the both side of body [12]



Figure: 1 Non-Segmental Vitiligo [13]

- Segmental vitiligo

Segmental vitiligo is also known as unilateral or localized vitiligo. In this type of vitiligo white patches impact only one side of body. It occurs less than non-segmental vitiligo. It is commonly occurs in children [12].



Figure: 2 Segmental Vitiligo [14]

CAUSES OF VITILIGO

When lack or loss of pigmentation (melanin) in the body. Then it causes vitiligo. Reason of this cause is unknown. Researcher have been done many research in vitiligo but still they are not able to find out the actual reason that why the loss of pigmentation (melanin) in body. Research results could be:

- **An autoimmune condition:** In this condition, human body immune system observed to healthy cells (melanocytes) as a foreign or unwanted invader like bacteria that can give harmful effects in body. It affects the body immune system activity and it develops or invent antibody for engulfing of melanocytes.
- **Genetic changes:** In this condition, If any changes occurs in human body's DNA or genetic mutation. Then, it can impact on the melanocytes functions. Due to this melanocytes does not perform their function. Overall 30 genes are present which can increase the risk factors of developing vitiligo in human body.
- **Stress:** If any person experience or face any type of accident or injury in their body and also any emotional stress or physical stress on their body. In this condition, then amount of pigment which is produce by the melanocytes cells is decrease or change. Then, vitiligo condition can occur.

- **Environmental triggers:** It is the condition, in which melanocytes cells functions are affected due to ultraviolet radiation and toxic chemical exposure [15][16][12].

COMPLICATIONS IN VITILIGO

In case of vitiligo person can experience some complications.

- Sunburn
- Eye problems
- Hearing loss [17]

SYMPTOMS OF VITILIGO

Vitiligo symptoms include:

<ul style="list-style-type: none"> • Patchy loss of skin colour and it generally first observed on the hands, face and area around the body openings and the genitals.
<ul style="list-style-type: none"> • Premature whitening or graying of hair on human scalp, eyelashes or beard.
<ul style="list-style-type: none"> • Loss or lack of colour in the tissues that line the inside of the mouth and nose.

Vitiligo can occur in any age but it generally occurs before age 30.

According to the type of vitiligo it may affect on body:

- **Nearly all skin surfaces:** It is known as universal type of vitiligo and in this uneven colour of skin or discoloration affects nearly the all skin surfaces.
- **Many parts of the body:** It is the common type of vitiligo and also known as generalized vitiligo. In this discolor patches are develop or increase on corresponding body parts.
- **Only one side or part of the body:** It is also known as segmental vitiligo. It occurs in younger age and after one or two years it stops.
- **One or only a few areas of the body:** This types of vitiligo also known as localized (focal) vitiligo.
- **The faces and hands:** This type of vitiligo also known as acrofacial vitiligo. It affects to face and hand. It spread around the body opening. Like eyes, nose and ears.

Still, it is not predictable that how this disease (vitiligo) are spread. Sometime without any treatment the patches formation are stop and skin color gets back.

Vitiligo also affects the person quality of life:

Vitiligo can change the physical appearance of human body because of pigmentation (melanin) imbalance.

- Self- conscious
- Anxious
- Depressed
- Angry
- Embarrassed
- Frustrated [18]

DIAGNOSIS OF VITILIGO

For the diagnosis of vitiligo, first physician should ask about patient family history. After that, physician can do close evaluation of patient skin. Most of the time physician can use a wood's lamp, It is also known as black light. In this, ultraviolet light are present. Physician shines this light on patient skin and observe. If

patient suffer from vitiligo then area of the skin those are affected by vitiligo are shows chalky and bright appearance due to the ultraviolet light.

Other tests are include:

- Blood tests are perform for check other autoimmune diseases.
- An eye examination are perform to check for uveitis, sometimes an inflammation can occur in part of the eye and it is occurs due to the vitiligo.
- A skin biopsy, in this takes a small sample from patient skin and examine under the microscope. Physician examine tissue and try to know why skin depigmented (lack of melanin) [19].

MANAGEMENT OF VITILIGO

Vitiligo treatment is not necessary, because vitiligo condition is not dangerous for patient and it can treat from the cosmetic. If patient suffer from widespread vitiligo and they experience emotionally, physically and socially problems. In that case patient can take help to healthcare and find a treatment for even skin tone by either restoring the color (repigmentation) or removing the remaining color (depigmentation) in patient body.

Some common treatments for vitiligo are:

- Medication
- Light therapy
- Depigmentation therapy
- Surgery
- Counseling [19]

In present time we need to cure of vitiligo by the help of herbal medicines. In the treatment of vitiligo by oral use of *Psoralea corylifolia* /*Ammi majus* plant extract are useful and beneficial. Some herbs which are useful in vitiligo treatment are:

Table: Herbs used for vitiligo treatment

S.NO.	(A) Herbs having photosensitizing/phototoxic property
1.	A.visnaga [20]
2.	A.lancea [21]
3.	A. japonica [22]
4.	C.tinctorius [21]
5.	F. carica [22]
6	F.hispida [23]
7.	Hypericum sp. [24]
8.	P. kurroa [20]
9.	P.tenuifolia [23]
10.	P. leucotomos [20]
11.	R. crispus [24]
12.	S. anacardium [23]
13.	X. strumarium [22]
	(B) Herbs having melanocytes proliferation/migration stimulation property
14.	A.dahuricae [25]
15.	A.membranaceus [24]
16.	C. occidentalis [26]
17.	C. chinensis [27]
18.	F.carthami [25]
19.	L.bicolor [24]

20.	L.lucidum [24]
21.	M.scurfpea [28]
22.	P.nigrum [22]
23.	P.corylifolia [20]
	(C) Herbs having immunomodulatory
24.	C.pilosula [21]
25.	C.melo [24]
26.	G.biloba [25]
27.	N.sativa [28]

PREVENTION

There are many causes of vitiligo. No particular way is available to prevent vitiligo. People can only reduce the risk of developing vitiligo.

- Practicing safe sun exposure habits.
- Taking care of skin by applying the moisturizer daily.
- Avoiding stress or injury to body [28].

CONCLUSION

From the ancient time, Herbal medicines are always good for human being. It gives fewer side effects than synthetic one. Herbal medicines are unexpensive or affordable for all people. Some herbal compounds are very beneficial and it considered as valuable medicinal tools for the treatment of vitiligo.

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