



## Short Communication

# A comprehensive case study on vitiligo: Navigating challenges and treatment strategies

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## ABSTRACT

This in-depth case study examines the complex terrain of vitiligo and the difficulties that thirty-year-old Mrs. A. must overcome. The story is told via a thorough analysis of her clinical appearance, which includes the emergence of distinct, symmetrical white spots on several body regions. Given Mrs. A's medical history of general health and her elevated stress levels prior to the depigmentation, the diagnostic procedure is carefully broken down, including physical examinations, medical history evaluations, and pertinent laboratory testing. Examining the epidemiology of vitiligo, the study clarifies its worldwide frequency, age at start, genetic predispositions, autoimmune correlations, and subtle effects on people from various ethnic origins. This case study stands out for its examination of the discrepancy between traditional textbook representations and the dynamic, Mrs. A's emotional and psychological reactions to vitiligo require individualised care. A multidisciplinary approach guides the development of treatment strategies that include photo therapy, topical corticosteroids, and specialised psychological support. The story ends with a discussion of the follow-up procedure, an assessment of the effectiveness of the treatment, emotional healing, and the continued difficulties of long-term care. This case study provides insightful information about the comprehensive care of vitiligo sufferers, highlighting the significance of customised, team-based approaches in addressing the complex aspects of this skin disease.

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## 1. Introduction

### 1.1. Diagnosis: Vitiligo

#### 1.1.1. Individual background

Mrs. A, a thirty-year-old woman, came into the dermatology clinic worried about patches of depigmentation that had been slowly appearing on different areas of her body for the previous year. Examination revealed several distinct, symmetrical white blotches on her hands, arms, legs, and face. Mrs. A showed extreme anxiety about the noticeable

changes in her skin, but she did not report any discomfort or itching in the vicinity.<sup>1-5</sup>

#### 1.1.2. Medical history

Mrs. A did not have a family history of autoimmune disorders or any notable chronic illnesses. Her health history was usually good. However, in the months preceding the commencement of depigmentation, she reported feeling more stressed out as a result of personal and professional difficulties.

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### 1.1.3. Incidence

The number of new cases of a disease that are recorded within a given time frame is known as its incidence. There is considerable variation in the reported rates of vitiligo among different populations.

### 1.1.4. History of past illness

Not significant

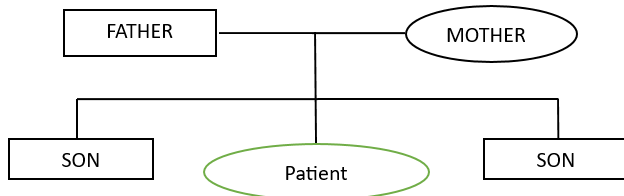


Figure 1: Family tree

### 1.2. Prevalence

The total number of cases of a disease that exist in a specific community at a given period is known as its prevalence. Worldwide, vitiligo is thought to be a rather common skin condition, with a prevalence estimate of 1%. Nonetheless, the frequency can change between various ethnic groups and geographical areas.

### 1.3. Factors Influencing Incidence and Prevalence

1. Genetics: Individuals who have a family history of vitiligo may be more susceptible, indicating a hereditary susceptibility to the illness.<sup>6-8</sup>
2. Ethnicity: Vitiligo can afflict people of any race or ethnicity, however because of the contrast between pigmented and depigmented areas, people with darker skin tones typically have more apparent cases of the condition.
3. Age: Vitiligo can develop at any age, but it often begins before the age of 20. It can also develop later in life.
4. Autoimmune Factors: Vitiligo is considered an autoimmune disorder, and conditions involving the immune system may contribute to its development.
5. Environmental Factors: Environmental triggers, such as stress, trauma, or exposure to certain chemicals, may play a role in the onset or exacerbation of vitiligo.
6. Genetics: Given that those with a family history of the disorder may be more susceptible, there is evidence of a genetic predisposition to vitiligo.
7. Ethnicity: Although vitiligo can affect people of any race or ethnicity, people with darker skin tones tend to notice it more because of the contrast between pigmented and depigmented areas.
8. Age: Vitiligo can strike at any time; however, it usually starts before the age of twenty. Later in life, it may also manifest.
9. Immune system disorders and other factors: Immune system disorders are thought to play a role in the development of vitiligo, which is classified as an autoimmune disease.
10. Factors related to the environment: Stress, trauma, or exposure to specific chemicals are examples of environmental triggers that can cause or exacerbate vitiligo.

The origin of vitiligo, a skin condition that is very widespread, is complex and multifaceted. The condition's occurrence, distribution, and patterns within populations are all covered by its epidemiology. The following are important details about the epidemiology of vitiligo:<sup>9</sup>

1. Worldwide prevalence
  - (a) Worldwide, vitiligo affects people of all racial and ethnic backgrounds.
  - (b) The frequency of vitiligo varies among various demographic groups and geographical areas.
  - (c) Age of Onset: Although vitiligo can appear at any age, it frequently does so before the age of twenty.
  - (d) Onset may also happen at a later age.
2. Gender distribution
  - (a) Vitiligo can affect both men and women.
  - (b) There is no discernible gender preference in the disorder.
3. Hereditary factors
  - (a) Family history can raise the chance of having vitiligo, indicating a genetic susceptibility to the disorder.
  - (b) There is evidence linking specific genetic markers to a heightened vulnerability to vitiligo.
4. Autoimmune associations
  - (a) Diabetes and thyroid issues are two more autoimmune illnesses that may be associated with vitiligo's prevalence. Vitiligo is classified as an autoimmune disorder.
5. Ethnic variation
  - (a) While vitiligo can affect individuals of all races, it may be more noticeable in people with darker skin tones due to the contrast between depigmented and pigmented areas.
  - (b) The prevalence of vitiligo is reported to be higher in populations with darker skin.
6. Environmental triggers

- (a) It is believed that vitiligo may develop or worsen as a result of environmental causes such as stress, trauma, or exposure to specific chemicals.

#### 7. Stability and progression

- (a) Vitiligo can progress at different rates; some cases stay stable for extended periods of time, while others may do so quickly.
- (b) It is unclear what factors affect how vitiligo stabilises or advances.

#### 8. Effect on quality of life

- (a) People with vitiligo who have noticeable depigmented patches on their skin may have psychological problems and emotional anguish, which can have a major effect on their quality of life.

#### 9. Investigations and progress

- (a) Research is still being done to better understand the immunological and genetic causes of vitiligo, which could lead to improvements in management and treatment.

#### 10. Difference in book picture and patient presentation

- (a) Patient-Centered Care: Although clinical factors are the main focus of textbooks, nurse management focused on Mrs. A's specific needs, taking into account her distinct emotional and psychological reactions to vitiligo.
- (b) Collaborative Care: This case study emphasises the value of collaborative care, in which nurses and dermatologists work together to develop a comprehensive management strategy that addresses the patient's outward symptoms as well as their overall health.



**Figure 2:**

## 2. Treatment Plan

Psychologists and dermatologists collaborated to create a multidisciplinary treatment plan for Mrs. A. Among the essential elements were:

1. Topical Corticosteroids: Mrs. A was provided prescription-strength corticosteroid creams to use on the afflicted regions in order to encourage repigmentation and minimise irritation.
2. Phototherapy (Narrowband UVB): To promote repigmentation and increase melanocyte activity, a course of phototherapy sessions was advised.
3. Psychological Assistance: After it was determined that Mrs. A's vitiligo was negatively affecting her mental health, therapy sessions were started in order to deal with emotional issues and encourage acceptance of oneself.

Disparity between textbook illustrations and patient presentation: The case study draws attention to the differences between the traditional textbook illustrations of vitiligo and Mrs. A's lively presentation. Nursing experts recognised that vitiligo has emotional consequences in addition to its visual appearance, which made individualised and compassionate care necessary.

### 2.1. Nursing Management Strategies

1. Patient Education: A thorough education about vitiligo, its course, and the suggested treatment strategy was provided as the first nursing intervention. With this newfound information, Mrs. A was able to take an active role in her care and make wise choices.
2. Psychosocial Support: Conscious of Mrs. A's emotional struggles, nursing care included frequent therapy sessions. In order to improve coping skills and cultivate a good self-image, emotional support was given.
3. Nurses worked with Mrs. A to monitor adherence to phototherapy sessions and recommended topical remedies. To determine the efficacy of the treatment and handle any new issues, evaluations were carried out on a regular basis.

Physical and psychosocial elements of vitiligo should be the main emphasis of a nursing care plan. Here is a broad overview including important nursing interventions:

1. Nursing Diagnosis: Depigmentation and the possibility of social isolation are linked to impaired skin integrity.

### 2.2. Goals

1. Bolster the integrity of the skin.
2. Improve your body image and sense of self.
3. Provide education on vitiligo management.

### 2.3. Nursing interventions

#### 1. Assessment

- (a) Assess the skin thoroughly to determine the location and size of regions that have lost pigmentation.
- (b) Examine the patient's coping strategies and emotional condition in relation to the psychosocial effects of vitiligo.

#### 2. Skin care

- (a) To keep the skin hydrated, promote the use of a hypoallergenic moisturiser.
- (b) Encourage the application of sunscreen to avoid sunburn and shield depigmented areas from the sun.

#### 3. Education

- (a) Give details regarding the aetiology, characteristics, and non-contagiousness of vitiligo.
- (b) Inform the patient about the various forms of treatment that are available, such as phototherapy and topical corticosteroids.
- (c) Stress the significance of following doctor's orders.

#### 4. Psychosocial Support:

- (a) Regularly check on the patient's emotional health and offer a secure environment in which they can voice any worries.
- (b) Provide details regarding counselling or support groups for emotional and psychological needs.
- (c) Promote a positive view of your body and self-acceptance.

#### 5. Cultural sensitivity:

- (a) Be mindful of how different cultures see skin conditions and beauty, as these may affect the patient's experience.
- (b) Discuss vitiligo-related cultural behaviours and beliefs.

#### 6. Collaboration

- (a) Work together with dermatologists and other medical specialists to guarantee that treatment is coordinated.
- (b) Keep an eye out for any indications of treatment side effects and report them.

#### 7. Follow-up

- (a) Make routine follow-up appointments to evaluate the success of the treatment and to offer continued assistance.

- (b) Keep an eye out for any indications of problems, like infection or deteriorating skin integrity.

#### 8. Community resources

- (a) Make connections between the patient and vitiligo support groups and community resources.
- (b) Inform them with internet resources and educational materials.

#### 9. Encourage self-care

- (a) Encourage the patient to practise mindfulness or relaxation techniques, or any other activities that support self-care and reduce stress.

### 3. Evaluation

Evaluate the degree to which objectives have been met, taking into account enhancements in skin integrity, self-worth, and treatment plan compliance.

Adapt the treatment strategy as necessary in light of the patient's reaction to interventions.

It's critical to customise the nursing care plan to the patient's specific requirements and preferences while taking into account the special circumstances surrounding their vitiligo experience. Furthermore, coordinated efforts with the medical staff are necessary to provide thorough and efficient care.

### 4. Follow-Up

Mrs. A's repigmentation gradually improved over a few months, especially in response to topical and phototherapy treatments. In order to track development, evaluate the effectiveness of the treatment, and make any required modifications to the treatment plan, regular follow-up appointments were arranged.

### 5. Outcome

Although total repigmentation was not accomplished, Mrs. A's depigmented patches were much better, and there were encouraging indications of improvement in her mental state. To handle potential relapses and treat any growing psychological concerns, it was stressed that ongoing help from healthcare professionals and ongoing monitoring would be necessary.

### 6. Conclusion

This case study emphasises the complexity of vitiligo and the value of a thorough, patient-focused treatment plan. In order to effectively treat vitiligo and improve the general quality of life for those who are afflicted, it is necessary to address both the physical and psychological elements of the disorder.

## 7. Source of Funding

None.

## 8. Conflict of Interest

None.

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