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Topical corticosteroid as a treatment for vitiligo: Case report

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***Abstract*---**Introduction: Vitiligo is an acquired pigmentation disorder of the skin with the manifestation of white macules due to the release of melanocytes. All therapies for vitiligo are limited and no treatment is known to consistently produce re-pigmentation in all patients. Case Presentation: A 43-year-old woman with this disease came with the chief complaint of white patches on the right forearm and back of the right and left hands. The white patches do not itch but make the patient feel uncomfortable and lower her self-confidence. Conclusion: Patients with vitiligo are characterized by white patches that develop and expand slowly over time, but each person is different. Topical corticosteroids still remain the gold standard in the treatment of small localized areas.

***Keywords*---**vitiligo, topical corticosteroid, skin, disease.

Introduction

Vitiligo is a pigmentation disorder of the skin with the manifestation of white macules due to the loss of melanocytes. Negative impacts on quality of life were found in patients with vitiligo. For instance, they do not like the appearance of their skin and end up feeling stressed and irritated which may affect their social interactions. There are several medical treatments available, which aim to stop the progression and induce skin re-pigmentation. The single or combined treatments have shown varying degrees of pigmentation and are in majority safe and effective. Current known treatments for vitiligo are limited and no treatment is known to consistently produce re-pigmentation in all patients. Therefore, the author raised this case with the aim that this can be studied further.

Case History

A 43-year-old female patient visited Wangaya General Hospital with the chief complaint of white patches on the right forearm and back of the right and left hands. The white patches started to appear since a few years ago and got worse in the last 5 months, with enlarged size. The white patches did not cause itchiness, yet discomforts the patients, hence heightens his lack of confidence. At first it was just a small white dot on the back of the right and left hand, but as time went on, it became more widespread. The patient thought the white patches would disappear, but the patches remained and were said to be getting wider. The white patches on the right forearm are said to appear almost simultaneously with the white patches on the back of the right and left hands and are enlarged. The patient said the white patches on the right forearm and the back of the right and left hands never got smaller. The patient denied any decreased sensation in the white patches and denied encountering any pain.

The patient denied any use of the drug on white patches on the skin. The patient does not have allergies to certain drugs or food ingredients. The patient has never had a similar history before. The patient also never had any other systemic disease. The patient denied any use of the drug on white patches on the skin. The patient does not have allergies to certain drugs or food ingredients. The patient has never had a similar history before. The patient also never had any other systemic disease. No family members have the same complaints as the patient or other systemic diseases. The general status at the time of examination was within normal limits and there were no other abnormalities other than skin abnormalities.

The dermatological status of the patient on the back of the right and left hands showed multiple depigmented macules (Fig. 1a-1b). A depigmented macula was also found on the patient's right forearm (Fig. 1c). Laboratory tests were not carried out.

The patient was diagnosed with Vitiligo with subtype namely Focal Vitiligo. The therapy given to the patient was non-medical therapy and medical therapy. Non-medical therapy was provided to the patients by explaining the illness, which includes the type of disease, causes, triggers, prognosis, self-care and regular treatment, needed nutrition, adequate sleep schedule, and required medical control after the first cycle of treatment finished for evaluation. Medical therapy was provided through topical corticosteroid therapy, namely Desoximethasone 0.25% which should be consumed twice a day. The prognosis in this patient was good.

figure 1a.
Fig 1a Multiple depigmented macules on back of right hand

figure 1b.
Fig. 1b Multiple depigmented macules on back of left hand

figure 1c.
Fig. 1c Depigmented macula on right forearm

Discussion

Vitiligo is known as a condition in which there is depigmentation of the skin.[1] Vitiligo is the most common depigmented skin disorder, with an estimated prevalence of 0.5-2% of the population in adults and children worldwide. Vitiligo

affects ethnic groups and people of all skin types without a predilection.[2] There are no clear differences between men and women.[3] Men and women are equally affected, although women are consulted more often, perhaps because of the widespread negative social stigma is more prevalent for women. The earliest onset was reported immediately after birth, while the latest was reported after 54 years. Most cases occurred less than 3 years in duration at referral, ranging from 2 months to 15 years.[2]

The etiology and pathogenesis of vitiligo are said to be unclear on the causes of melanocyte damage.[4] The stress response on the skin that elicits an autoimmune response in genetically susceptible individuals is thought to be triggered by a an event that ultimately targets the melanocytes that predispose the appearance of vitiligo. Several theories were put forward indicating a relationship with the development of vitiligo, namely autoimmunity, oxidative stress, melanocyte growth and decreased melanocyte adhesion, viral infection, and neural mechanisms. Autoimmune theories are currently considered and generally accepted.[5] Neural theories tend to be used as a basis for more localized types such as segmental or focal vitiligo.[4]

Patients with vitiligo are characterized by white patches that develop and became widespread slowly over time, but each person encountered different symptoms. Some patients were found with vitiligo has a negative impact on their quality of life. For example, they do not like the appearance of their skin and end up feeling stressed, irritated which will affect their social interactions.[6] In 2011, an international consensus classified segmental vitiligo (SV) differently from other forms of vitiligo and the term vitiligo was defined for all forms of non-segmental vitiligo (NSV). Focal vitiligo

refers to small, localized, depigmented lesions without clear pattern of distribution and do not further develop after a period of 1-2 years. This may evolve to SV or NSV.[2] The diagnoses of vitiligo are mostly clinical-based on the findings. A diagnosis of vitiligo usually does not require confirmatory laboratory tests.[2]

There are currently several medical treatments available, which aim to stop the progression and induce skin re-pigmentation. The single or combined treatments have shown varying degrees of pigmentation and are mostly safe and effective. Current known treatments for vitiligo are limited and no treatment is known to consistently produce re-pigmentation in all patients.[7]

Corticosteroids may be recommended for patients with limited extra-facial involvement for a period of not more than 3 months. In children and adults, the use of daily topical therapy is also suggested.[8] Topical corticosteroids are useful for small localized areas and remain a gold standard in treatment. The therapeutic effect of vitiligo is to modulate and inhibit inflammation.[7] Potent topical corticosteroids have been found to be effective and are therefore considered as the first category and the safest choice of treatment.[8] In order to increase the likelihood of a therapeutic response when topical corticosteroids are used as monotherapy, very potent topical corticosteroids may be preferred.[7]

A meta-analysis study confirmed its effectiveness in focal vitiligo. Steroid-induced re-pigmentation occurs within 1–4 months of treatment, in a perifollicular pattern and from the edges of the lesion. Corticosteroids with low potential showed no therapeutic effect at all.[9] Systemic corticosteroid therapy is not considered useful for substituting stable vitiligo pigment.[8]

Factors that are said to lead to a poor prognosis include early onset in childhood, the duration of disease spans >3-5 years, immersion of more than 30% of body surface area and progressive disease.[10]

Conclusion

Patients with vitiligo are characterized by white patches that develop and expand slowly over time, but each person encounters different symptoms. The diagnoses of vitiligo are mostly clinical-based derived from the findings obtained. Topical corticosteroids still remain a gold standard in the treatment of small localized areas.

Disclosures
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References

1. Allam, M & Riad, H. Concise Review of Recent Studies in Vitiligo. Qatar Medical Journal. 2013; p. 1-19.
2. Bergqvist, C and Ezzedine, K. Vitiligo: A Review. Dermatology. 2020; p. 571-592.
3. Bilal, A & Anwar, I. Guidelines for The Management of Vitiligo. Journal of Pakistan Association of Dermatologist. 2014; 24(1): 68-78.
4. Bleul, R & Eberlein, B. Therapeutic Management of Vitiligo. Journal of The German Society of Dermatology. 2018; p. 1309-1313.
5. Ghafourian E, et al. Vitiligo: Symptoms, Pathogenesis and Treatment. International Journal of Immunopathology and Pharmacology. 2014; 27(4): 485-489.
6. Kamaluddin. (2021). Government and Private Collaboration in Coping with Covid-19 in Sorong City. International Research Journal of Management, IT and Social Sciences, 8(5), 333-341. https://doi.org/10.21744/irjmis.v8n5.1907
7. Lopez, K et al. Update and New Medical Treatments for Vitiligo Review. Experimental and Therapeutic Medicine. 2021; 22: 1-11.
8. Passeron, T. Medical and Maintenance Treatments for Vitiligo. Dermatologic

Clinics. 2017; 35(2): 163-170.
9. Peters, T & Yoo, K. What is Vitiligo?. The Society for Pediatric Dermatology. 2015; p. 1-2.
10. Phiske, M. Vitiligo in Children: A Birds Eye View. Current Pediatric Reviews. 2016; 12(1): 55-66.
11. Rahman, R & Hasija, Y. Exploring Vitiligo Susceptibility and Management: A Brief Review. Biomedical Dermatology. 2018; p. 1-13.
12. Suryasa, I. W., Rodríguez-Gámez, M., & Koldoris, T. (2021). Get vaccinated when it is your turn and follow the local guidelines. International Journal of Health Sciences, 5(3), x-xv. https://doi.org/10.53730/ijhs.v5n3.2938
13. Wirawan, I. G. B. (2018). Surya Namaskara benefits for physical health. International Journal of Social Sciences and Humanities, 2(1), 43–55. https://doi.org/10.29332/ijssh.v2n1.78