

# A clinico-dermatoscopic study of patients with melasma and effect of using modified kligman's formula triple combination cream

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## Abstract

**Background:** Melasma is a common acquired facial hypermelanosis condition most commonly on sun exposed areas. Conventional treatment of melasma includes a sunscreen and hypo pigmenting agents singly or in combination with other agents. Most commonly used combination is Kligman's formula. A number of modification of kligman's formula is available. Patient is using this combination product without proper knowledge for indefinite period of time and suffered with various side effects. **Aims and objectives:** The objective is to carry out a detailed clinical and dermatoscopic study of melasma and to analyse the effects of modified Kligman's formula triple combination creams for the treatment of melasma. **Materials and Methods:** 80 patients of all age groups and both sexes were examined clinically and dermatoscopically for facial melasma and effect of using unsupervised modified kligman formula triple combination cream. **Results:** 67 patients out of 80 were found using modified Kligman's formula triple creams without taking proper consultation from the dermatologist. 59 patients out of 67 came with side effect of using modified kligman's formula triple combination cream. **Conclusions:** Most of the patients of melasma came to dermatologist with a series of complications which they had already developed by the use of modified Kligman's formula topical cream. Which is again a challenging for dermatologist to treat as former was melasma and later are complication. By looking at the scenario, modified Kligman's formula topical creams must be used under doctor's supervision and proper counseling should be given to patient for its mode of usage and their side effect profile, and this kind of product should not be sold without prescription.

**Key Words:** Melasma, Dermatoscope, Kligman's Formula.

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## INTRODUCTION

Melasma is a relatively common, acquired symmetric hypermelanosis characterized by irregular, light to gray brown macules and patches involving the sun exposed areas of the skin. It typically affects women of

reproductive age with Fitzpatrick skin type IV-VI, though the condition can occur in men also. The cause of melasma is multifactorial and includes pregnancy, sun exposure, hormone therapy, use of cosmetics, and racial or genetic effects. Though melasma does not cause any major health related problems it has a deleterious impact on the health related quality of life. It severely affects social life, emotional well-being and physical health of the patients. Clinically melasma is classified **based on the area of distribution** as

- Centrifacial,
- Malar and
- Mandibular types

**Dermatoscope** assist in diagnosing melasma and helps in to classifying melasma. A dermatoscope is a non-invasive, diagnostic tool which magnifies subtle clinical surface features of skin lesions as well as unveils some

subsurface skin structures not normally visible even with a magnifying lens. It has facility of inbuilt specialized illuminating system (visible light, polarized light, and ultraviolet sources), adjustable magnification and ability to assess the structures as deep as the reticular dermis. Dermatoscopy is of great value in not just early diagnosis and differential diagnosis of melasma but ability to record digital images for future analysis, help in determining the outcome of melasma treatment. It assists in diagnosing melasma and helps in classifying melasma as epidermal, dermal and mixed. It classify as

1. **Epidermal:** Dark brown color sparing follicles and sweat gland openings
2. **Dermal:** Blue or bluish gray colour
3. **Mixed:** Presence of both epidermal and dermal features

Conventional treatment of melasma includes a sunscreen and hypo pigmenting agents singly or in combination with other agents. Most commonly used combination is Kligman’s formula. A number of modification of Kligman’s formula is available. Patient is using this combination product without proper knowledge for indefinite period of time and suffered with various side effects

### AIMS AND OBJECTIVES

- To classify melasma clinico-dermatoscopically and To evaluate the clinico-dermatoscopic findings in patient of melasma using modified Kligman’s formula triple combination cream.

### MATERIAL AND METHODS

Eighty patients of all age groups and both sexes are clinically diagnosed as melasma who presented for the first time were selected for this study. A detailed history was taken with reference to the onset, duration, progression, family history, obstetric history, drug history, previous treatment, and sun exposure. Dermatological examination of the lesions was carried out with respect to morphology, configuration, distribution and the melasma was categorized into

epidermal, dermal or mixed based on dermatoscopy. The patients were further classified according to the distribution of the lesions into malar, centrofacial, or mandibular.

### OBSERVATION AND RESULTS

Of the 80 patients enrolled in the study, 47 were females and 33 were males, all above 18 years of age. In this study 59 had malar distribution and 21 had centrofacial type of melasma and there was no patient with mandibular distribution. Out of 80 patient 48 were found to be dermal and is most common type. 67 patients out of 80 were found using modified Kligman’s formula triple creams. 59 patients out of 67 came with side effect of using modified kligman’s formula triple combination cream.

**Table 1: Clinical diagnosis**

Clinical type	Frequency	Percentage
Malar	59	73.75
Centrofacial	21	26.25
Mandibular	---	---
<b>Total</b>	<b>80</b>	<b>100</b>

**Table 3: Dermatoscopic diagnosis**

Dermatoscopic feature	Frequency	Percentage
Regular network	15	18.75
Irregular network +bluish gray pigment	48	60
Both	17	21.25
<b>Total</b>	<b>80</b>	<b>100</b>

**Table 4: Side effect after unsupervised used of modified kligman formula**

Side Effect	Frequency	Percentage
Erythema, Scaling, Burning	31	52.5
Itching		
Atrophy	4	6.7
Acneform eruption	12	20.3
Hypertrichosis	5	8.4
Telangiectasia	4	6.7
Rosacea form eruption	2	3.3
Onychosis	1	1.6
<b>Total</b>	<b>59</b>	<b>100</b>



Figure 1:



Figure 2:



Figure 3:



Figure 4:

## DISCUSSION

Melasma is more common in female than male which may be attributable to a hormonal influence as in pregnancy, use of oral contraceptive pills, and the use of cosmetics. Melasma of malar distribution and of dermal type is more common. Out of all patient using modified Kligman's formula 88% of patient are suffering from side effects, so caution should be taken and should not be used without proper consultation.

## CONCLUSION

Most of the patients of melasma came to dermatologist with a series of complications which they had already developed by the use of modified Kligman's formula topical cream. Which is again a challenging for dermatologist to treat as former was melasma and later are complication. By looking at the scenario, modified Kligman's formula topical creams must be used under doctor's supervision and proper counseling should be given to patient for its mode of usage and their side effect profile, and this kind of product should not be sold without prescription.

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