Research Article

Effect of silymarin in treatment of melasma

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Abstract
Melasma is a chronic skin disorder that results in symmetrical, blotchy, brownish facial pigmentation. It can lead to considerable embarrassment and distress. Melasma presents as macules and larger flat brown patches. These are found on both sides of the face and have an irregular border (Vaneeta and Amit, 2011)**.**
Keywords: melasma, silymarin, dermoscope and chemical peel.
Abbreviations: Aml, ATRA, DOPA, EGCG and Dmr.

Aim of work
The present study aims to compare the efficacy of topical silymarin versus kligman's formula and chemical peeling by 20% trichloroacetic acid in the treatment of melasma.

Material and method
This study was conducted on 48 cases of melasma attending the out-patient clinic of the dermatology, STD***'s &*** Andrology department of Minia University Hospital. An informed consent had been obtained from each patient to be enrolled in the study, photographed and biopsied. The procedure, potential complications and realistic expectations were dicussed with the patients.

The patients were classified into 3 groups each group contain 16 patients:
Group 1: Was treated by topical silymarin 7 mg/ml twice daily for 3 months.
Group 2: Was treated by Kligman***'s formula*** once at night for 3 months.
Group 3: Was treated by 20% trichloroacetic acid once every two weeks for 3 months.

Results
In the current study, the pattern of melasma was malar (4 cases), centrofacial (40 cases) and mandibular (4 cases).

When the three groups were compared as regards MASI score it was statistically significant before (P=0.03) and after (P=0.004) treatment.

When the three groups compared clinically, it was statistically significant (P=0.02).
The comparison of the three groups regarding melasma type was non statistically significant (P=0.09).

Finally when the three groups compared as regards side effects this was statistically significant (P=0.001).

Discussion
The present work, has been conducted to study the clinical, dermoscopical and histopathological changes in melasma patients after treatment with topical silymarin and to compare these changes with that of Kligman's formula and 20% TCA peeling.

The present study revealed promising results after topical silymarin therapy of melasma as the MASI score was significantly reduced after treatment (P=0.001), this was consistent with the results reported by Altaei, (2012) who used topical silymarin in the treatment of melasma twice daily for 4 weeks and observed significant improvement after treatment by silymarin.

Although cases of mixed melasma showed satisfactory clinical improvement after topical silymarin, the improvement was more evidenced in epidermal cases of melasma.

In our study, the effect of silymarin was also confirmed objectively by both dermoscopic and histopathologic examination of lesional skin after silymarin treatment which showed significant decrease in epidermal melanin (in epidermal melasma) and dermal melanin in (mixed melasma) when compared to pretreatment sections.

None of the treated patients in silymarin treated group reported any side effects due to its use, this was in agreement with the study of Altaei, (2012) who concluded that silymarin is safe and no side effects were reported by their patients.

Conclusion

The three treatments were effective in treatment of melasma. Kligman's formula was the best clinically, histopathologically and by dermoscope but the recurrence appeared rapidly during the period of follow up and it was the most expensive. Topical silymarin was effective clinically, histopathologically and by dermoscope without any side effects during application or recurrence during follow up period. TCA (20%) was effective clinically, histopathologically and by dermoscope but with side effects in all patients while no recurrence was noticed during the three months of follow up. So silymarin was the best as it was effective, safe without side effects or recurrence and not expensive.

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