Clinical profile and management pattern of melasma patients in Western Nepal: A Hospital Based Study

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Citation

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Abstract

Introduction: Melasma is an acquired hypermelanosis of sun-exposed areas. Melasma is much more common in women than in men. Women are affected in 90% of cases. The patient usually presents with tan to brown patches. Multiple factors have been postulated to involve in the etiology and pathogenesis of melasma including pregnancy, oral contraceptives, genetics, sun exposure, cosmetics and race.

Objectives: The objectives of the present studies are to study the demographic details of the melasma patients visiting the Manipal Teaching Hospital (MTH), to study the drugs used in management of melasma and to estimate the treatment cost to the patients.

Materials and methods: We went through the records of the patient at MTH and found out the number of patients suffering from melasma and other related data from 25th November 2005 to 30th November 2007. The data obtained were analyzed as per the study objectives.

Results: Altogether 107 patient files were included in the study. There were 75 (70.09%) females and 32 (29.90%) males (the total is 107). More than 50% of the patients were above the age 20 years. Most common site of occurrence of pigmentation was forehead accounting for 56.45% (n= 70) of the total case followed by cheeks 12.09% (n=15). Altogether 290 drugs were used in the patients with a Mean ± SD of 2.71 ± 0.89 drugs per patient. The Mean ± SD cost of medications was NRs 458 ± 251.36.

Conclusion: The present study analyzed the clinical profile and treatment pattern of the melasma patients visiting MTH. Majority of the patients were of child bearing age. Sun screens were the most commonly employed medications followed by antioxidants 20 (6.89%) and antibiotics 18 (6.2%).

INTRODUCTION

Melasma is an acquired hypermelanosis of sun-exposed areas. It presents as symmetrical hyperpigmented macules and patches, which can be confluent or punctate. The cheeks, the upper lip, the chin, and the forehead are the most common locations, but it can occasionally occur in other sun-exposed locations. Chloasma is a synonymous term sometimes used to describe the occurrence of melasma during pregnancy. Melasma is much more common in women than in men. Women are affected in 90% of cases.[1] Though commonly seen in women, it can also occur in men. The patient usually presents with tan to brown patches. [3] Multiple factors have been postulated to involve in the etiology and pathogenesis of melasma including pregnancy, oral contraceptives, genetics, sun exposure, cosmetics and race.[4]

Though melasma does not cause any major health related problems it severely affects social life, emotional well-being of the pateints.[5] The incidence of melasma in pregnant ladies with white skin is reported to be more than 50% of the cases.[6] However, in India it was found to be nearly 10%. 6 Though it affects the quality of life of the patients, there is only little awareness among the pregnant patients about the etiology of melasma.[7] The management of melasma usually involves hydroquinone in an alcoholic glycol or cream base applied over the skin.[8] The literature regarding the clinical profile, management pattern and treatment outcomes of

melasma is lacking in Nepal. Hence, we undertook the study with the following objectives.

Objectives: The study was conducted with the following objectives.

1. To study the demographic details of the melasma patients visiting the Manipal Teaching Hospital (MTH)
2. To study the drugs used in management of melasma
3. To study the cost spent by the patients in buying medications for melasma

Materials and methods: The materials and methods of the study are mentioned below.

Study site: Dermatology Out Patient Department of Manipal Teaching Hospital (MTH). It is a 700 bedded hospital located at Phulbari, Pokhara (having an average occupancy of around 300 beds)

Study type: Retrospective, cross sectional study.

Inclusion criteria: All the melasma patients visiting the dermatology outpatient department of Manipal Teaching hospital between the periods of 25/11/2005 to 30/11/2007 were included.

Method of data collection: We went through the records of the patient at MTH and found out the number of patients suffering from melasma and other related data from 25/11/2005 to 30/11/2007

Data analysis: The data obtained from the filled patient profile form were entered in the Microsoft excel programme and were analyzed. The SPSS version 9.0 was used to carry out the descriptive statistics.

RESULTS

Altogether 107 patient files were studied. The Mean SD age of the patients was 26.31 6.10 years. The age and sex distribution of the patients are listed in Table 1.

Figure 1

Table 1: Age and sex distribution of the study population (n=107)

Parameters	Age group	Number	Percentage
Age distribution (years)	0-10	0	0
	11-20	15	14.01
	21-30	70	65.42
	31-40	20	18.69
	41-50	2	1.86
Sex	Female	75	70.09
	Male	32	29.90

Type of pigmentation (n= 107): It was found that 47 (43.925) of the pigmentations were malar followed by centrofacial 45 (n=42.05%) and the type of pigmentation was not documented in 15 (14.01%) of the patients.

Site of pigmentation (n=124): Most common site of occurrence of pigmentation was forehead. The details are listed in Table 2.

Figure 2

Table 2: Site of pigmentation

Site	Number	Percentage
Forehead	70	56.45
Cheeks	15	12.09
Nose	11	8.87
Nasal bridge	8	6.45
Nape of neck	3	2.41
Nasal dorsum	3	2.41
Cornea	1	0.8
Eye lid	1	0.8
Back of trunk	1	0.8
Lumber area	1	0.8
Nasal stream	1	0.8
Scalp	1	0.8
Upper back	1	0.8
Unknown	7	5.64

Dosage form (n=290): Altogether 290 drugs were used in the patients with a Mean SD of 2.71 0.89 drugs per patient. The details are listed in Table 3.

Figure 3

Table 3: Dosage form (n=291)

Dosage form	Number	Percentage
Lotion	139	47.93
Cream	111	38.27
Gel	14	4.82
Tablet	12	4.13
Capsule	8	2.75
Solution	3	1.03
Soap	2	0.68
Soap	1	0.34

Therapeutic category of the drugs used: Altogether 290 drugs were prescribed with a Mean SD of 2.71 0.89 drugs per patient. The most commonly used drugs were sunscreen accounting for 75.51% (n=219). The details are listed in Table 4.

Figure 4

Table 4: Therapeutic category (n=290)

Therapeutic category	Number	Percentage
Antibiotic	18	6.2
Sunscreen	219	75.51
Antioxidants	20	6.89
Antifungal	13	4.48
Topical steroids	11	3.79
Antihistaminic	2	0.68
Corticosteroids	2	0.68
Vitamins	2	0.68
Antitussive	1	0.34
Medicated soap	1	0.34
Unknown	1	0.34

Top ten drugs used: The mostly prescribed drug in the hospital were the Eukroma cream 26.69% (n= 63) followed by Elovera SPF lotion 25.42% (n=60). The top ten drugs used are listed in Table 5.

Figure 5

Table 5: Top ten drugs prescribed (n=290)

Drugs	Number	Percentage
Clarithromycin gel	8	3.38
Aloe extract+ Vitamin E acetate+ Octylmethoxycinnamate+ Oxybenzone	60	25.42
Hydroquinone cream	63	26.69
Fluticasone cream	5	2.11
Glycolic acid + hydroquinone lotion	37	15.67
Benzophenone +Octyl methoxycinnamate+silicon oil +titatnium trioxide lotion	10	4.23
Hydroquinonw + oxybenzone + octinoxite cream	13	5.50
Retinoic acid A 0.025%	12	5.08
Octyl Methoxycinnamate+ avobenzene+ oxybenzone	20	8.47
Vitamins and Antioxidants	8	3.38

Outcome of the treatment: Among the total 107 patients nearly 35.51% (n= 38) of the patient condition were improved. But more than 50% (n= 61) of the patients condition were unknown.

Cost of medication (n=107): The Mean SD cost of medications during a single visit was NRs 458 251.36 NRs. The cost of medication for 107 patients is listed in Table 6.

Figure 6

Table 6: Cost of medication

Cost range	Number	Percentage
Up to 100	3	2.8
101-200	4	3.7
201-300	11	10.3
301-400	29	27.1
401-500	22	20.6
501-600	22	20.6
601-700	9	8.4
More than 700	7	6.5

DISCUSSION

The present study identified the pattern of melasma in patients visiting the MTH, Pokhara. Melasma normally occurs mainly in pregnant women and in women taking anovular hormones. It is also known to occur in dark skin men. 8 In our study we found nearly one third of the cases to be men.

We found the mean age of the patients to be 26.3 years. In a study from Brazil the mean +/- SD age was 41.1 +/- 6.8 years.[9] However, the study included only women whereas our study included both the sexes. Another study from Brazil had the mean age of 42 years.[10]It is well known that melasma

occurs in women during their reproductive years. 1 In general persons with light brown skin types from regions of the world with intense sun exposure are much more prone to the development of melasma.[11] Solar and ultraviolet exposures are the most crucial etiologic factors. Pregnancy, certain endocrine disorders and hormonal treatments, cosmetics, phototoxic drugs, and antiseizure medications are well-known inducing and exacerbating factors.[12] In our study we did not evaluate the various parameters like UV exposure, drug history etc.

The common type of pigmentation was found to be malar followed by centrofacial. In our study we found the common sites of occurrence to be malar and centrofacial and extrafacial. In general, it commonly occurs in forehead, cheeks, temples, upper lip.[3] The goal of pharmacotherapy in melasma is to reduce morbidity and to prevent complications.[1] The choice of proper treatment should take into account the type of melasma to be treated, the skin complexion of the patient, possible previous treatments, the expectations and compliance of the patient, and the season in which the treatment is started.[12]

The use of broad-spectrum (UVA + UVB) sunscreen is important, as is topical hydroquinone, the most common treatment for melasma. Other lightening agents include retinoic acid (tretinoin) and azelaic acid. Combination therapies such as hydroquinone, tretinoin, and corticosteroids have been used in the treatment of melasma, and are thought to increase efficacy as compared with monotherapy.[13] In our study we found the most commonly used drugs to be sunscreen lotions. Chemical peels, laser treatments, and intense pulsed light therapy are additional therapeutic modalities that have been used to treat melasma.[13]While managing the patients with melasma it is recommended that the treating physician must consider the devastating psychosocial impact of pigmentary imperfections within the realm of the benefits and risks associated with each treatment.[14]

LIMITATIONS

Our study had a few limitations. The study evaluated only a few parameters and also did not follow up the patients.

CONCLUSION

The present study analyzed the clinical profile and treatment pattern of the melasma patients visiting MTH. Majority of the patients were females and were of child bearing age. Sunscreens were the most commonly used medications and the drug therapy was associated with huge economic impact.

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