TANG [HUMANITAS MEDICINE]

Case report

Therapeutic Effect of Majoon Mundi and Qairooti Karnab in Dā al-Ṣadaf (Psoriasis): A Case Series

Gulnaz Fatima Siddiqui[1], Shahid Akhtar Siddiqui[2], Arzeena Jabeen[3], Qamaruddin[4], Munawwar Husain Kazmi[5]

[1]MD Scholar, Department of Medicine, Central Research Institute of Unani Medicine, Hyderabad 500038, [2]Assistant Professor, Department of Pediatrics, MLN Medical College, Allahabad 211002, [3]Lecturer ,[4]Professor and Head, Department of Medicine, Central Research Institute of Unani Medicine, Hyderabad 500038, [5]Professor, Head Department of Unani Pharmacology and Director In-charge of Central Research Institute of Unani Medicine, Hyderabad 500038.

ABSTRACT

Introduction: Psoriasis is a major health concern around the world. Physicians of the Unani system of medicine have been treating psoriasis for centuries.

Aim: The purpose of our study was to assess the effect of Majoon Mundi (a semisolid Unani medication intended for oral intake used as blood purifier) and Qairooti Karnab (a Unani medication in paste form intended for topical application used as emollient) in the treatment naïve psoriasis cases and to collect data to warrant further clinical trials.

Material and Methods: Psoriasis cases were diagnosed clinically. Data were collected during treatment of five patients of psoriasis treated with the Majoon Mundi (oral intake of 5 gm twice daily with 200 ml of water for 12 weeks) and Qairooti Karnab (topical application on affected sites twice a day for 12 weeks). Patients were treated for 12 weeks. Treatment response was seen with clinical improvement in skin lesions and measurement of Psoriasis Area and Severity Index (PASI Scoring) before and after treatment.

Results: Reduced PASI Score was observed in all five patients after 12 weeks of treatment [PASI before and after treatment was (mean±SD) 20.7±4.6 vs. 3.2±1.8; p-value <0.05.]. Clinical improvement was noticed within an average of 4 weeks of treatment.

Conclusion: Preliminary findings indicate the potential therapeutic role of Majoon Mundi and Qairooti Karnab in the treatment of psoriasis. Clinical trials based on this Unani pharmacopeial formulation should be conducted to explore the therapeutic potential of this formulation in psoriasis

Keywords Melissa parviflora Benth, Phytochemistry, Therapeutic uses

INTRODUCTION

Psoriasis is a chronic, immune-mediated, inflammatory skin disease characterized by skin surface inflammation, epidermal proliferation, hyperkeratosis, angiogenesis and abnormal keratinization (Peternel et al. 2009; Rahman et al. 2012). Globally, it affects about 3 % of the world population (Danielsen et al. 2013). It can affect any part of the body with varying intensity ranging from a single spot to all over body skin (Jacquiline Habashy n.d.; Schön and Boehncke 2005). The basic pathophysiology behind the development of Psoriasis is T-cell activation, migrated from lymph nodes and systemic circulation to the skin causing the release of cytokines. Cytokines trigger cutaneous inflammation and hyperproliferation of the epidermis resulting in erythematous, raised plaques with overlying scales (Bonifati and Ameglio 1999; Nestle, Kaplan, and Barker 2009; RM et al. 2011).

*Correspondence: Gulnaz Fatima
E-mail: gulfatima123@gmail.com
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Psoriasis may be classified clinically into non-pustular and pustular types. Non-pustular psoriasis consists of plaque (psoriasis vulgaris), guttate, erythrodermic, inverse, palmoplantar and psoriatic arthritis. Pustular psoriasis may be generalized pustular, impetigo herpetiformis or localized pustular type. Psoriasis vulgaris constitutes about 90% of cases of psoriasis (Sarac et al. n.d.).

Most common clinical type is chronic plaque psoriasis, detected as well defined by itchy erythematous plaques with silvery or micaceous scales and symmetrical distribution (Christopher et al. 2002). Candle grease like scales may be produced on scratching the psoriatic lesion (Candle grease sign) (Behl 2000). Pinpoint bleeding occurs when scales are removed (Auspitz sign) (Sainani, Gurumukh S. 1999). Various modes of treatments are available for the management of psoriasis-like topical and systemic administration of steroids, phototherapy, and combination of both, but have got some limitations with serious complications such as skin carcinoma, hepatotoxicity and worsening of disease (Papadakis, McPhee, and Rabow n.d.). In Unani medicine, psoriasis is described as Dā al-Ṣadaf. It is a common skin disorder characterized by dryness, plaques, and scales like the oyster shells (Al n.d.; Alīm 2002). It is supposed to be caused by Sauda-e-Mohtaraq (burnt melancholic humor) and Merrah-e-Sauda (burnt bile mixed with melancholic humor) which has an irritant nature that destroys the skin and produces severe itching, roughness and scaling (Aleem and Khan n.d.; M.

A. Khan n.d.). Its aggravating factors include indigestion, uncleanness, and diet (cold and dry and salty diet) (Ibn Rushd 1980; H. Khan n.d.; Majūsī 2010).

The physicians of the Unani system of medicine have been treating various forms of Dā al-Ṣadaf (Psoriasis) since centuries. A large number of single and compound drug preparations have been documented in the treatment of Dā al-Ṣadaf. Several Unani formulations have been proved for their efficacy in the management of Dā al-Ṣadaf (Psoriasis). A recent placebo-controlled randomized trial has proved the efficacy of Majoon Ushba and Roghane Hindi in the management of psoriasis (Lone, Ahmad, and Naiyar 2011).

These scientific studies have validated the anti-inflammatory, blood purifier, antioxidant, emollient nature of plant-based medicines. Majoon Mundi (oral) and Qairooti Karnab (topical application as an emollient) is, a polyherbal preparation of Unani medicine is used as a purifier of abnormal humor from the blood and emollient for moisturizing skin. Psoriasis is a common skin disease affecting 1-2 % of the world population. So, the present study was conducted to assess the safety and efficacy of two pharmacopeial Unani formulations (Majoon Mundi and Qairooti Karnab) in the management of psoriasis on scientific parameters.

METHODS

Informed consent was taken from all patients. The human data's which are included in this case series were obtained in compliance with the declaration of Helsinki.

Interventions:

Majoon Mundi (Kabeeruddin H. M 2006)

Serial No.	Constituents	Quantity
1	*Aṣl al-Sūs (Glycyrrhiza glabra)*	50 gm
2	*ĀmlaKhushk (Emblicaofficinalis)*	50 gm
3	*Balela (Terminalia bellerica)*	50 gm
4	*Post Halela Zard (Terminalia chebula)*	100 gm
5	*Shāhtra (Fumaria officinalis)*	50 gm
6	*Kishnīz Khushk (Coriandrum sativum)*	50 gm
7	*Gul-i Mundi (Sphaeranthus indicus)*	400 gm
8	*Halela Sīyāh (Terminalia chebula)*	50 gm
9	*Ghī*	50 gm
10	*Sugar*	2.4 Kg

Table 1.

Dosage Form: Majoon (semisolid)
Dose: 5 gm twice daily with 200 ml of water for 12 weeks
Route of Administration: Oral; in semi-solid form

Qairooti-e-Karnab (Anonymous 1951)

Serial No	Constituents	Quantity
1	*Āab-e-Chuqandar (Beta vulgaris)*	30 gm
2	*Āab-e-Shaljam (Brassica repa)*	30 gm
3	*Āab-e-Barg-e-Karnab (Brassica oleracea)*	30 gm
4	*Loab-e-Gul-e-Khaṭmi (Althea officinalis)*	30 gm
5	*Āab-e-Banafsha (Viola odorata)*	30 gm
6	*Mom (Wax)*	30 gm
7	*Roghan-e-Gul (Rosa damascus)*	150 ml

Table 2.

Dosage Form: Ointment
Dose: The ointment was applied locally on the affected site twice a day in an amount sufficient to cover skin lesion
Route of Administration: Local Application on affected sites without any add on

CASE PRESENTATION

Case 1: A 55 years old Indian male shop owner came to the outpatient department of a teaching hospital with chief complaints of (1) Itching (2) Erythema (3) Induration /Thickness (4) Scaling followed by pinpoint lesions on the flexural aspect of both forearms from last 14 years. On history taking patient revealed that 14 years back, he first noticed a small spot of dryness with itching over the head insidiously increase on upper limb, trunk and then lower limbs. No significant past or family history was noted except for a history of smoking for the last 15 years. For which he went to the local dermatologist and was prescribed oral and local steroids for 3 years. At that time lesions and itching disappeared, but after some time relapse of lesions took place. The situation was very frustrating and he consulted another dermatologist for further treatment. He was advised for biopsy of lesions and kept on steroids for another 2 years. The biopsy confirmed the diagnosis of Psoriasis. He was explained that there is no permanent cure available for psoriasis; it could only be managed by regular use of steroids and other drugs. Then the patient came to our center for further treatment on OPD basis. Here patient was given Unani formulations (Majoon Mundi and Qairooti Karnab) under study.

Case 2: A 38 years old Indian male farmer came to the outpatient department with chief complains of (1) Itching (2) Erythema (3) Induration /Thickness (4) Scaling followed by pinpoint lesions on both forearms from past 15 years. Lesions initially appeared on elbows and gradually spread all over the body. History of multiple remissions and relapses was present. He took some homeopathic medicines for the last 14 years. No significant past or family history except for smoking since last 16 years was present. No documents of past treatment were available. He was given study drugs as per protocol.

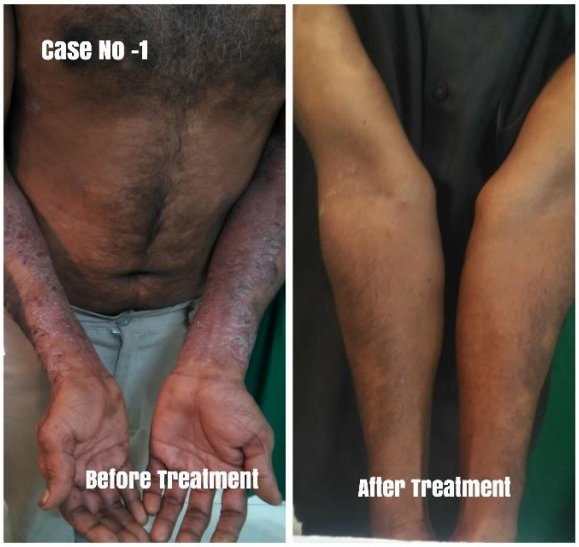

Fig.1

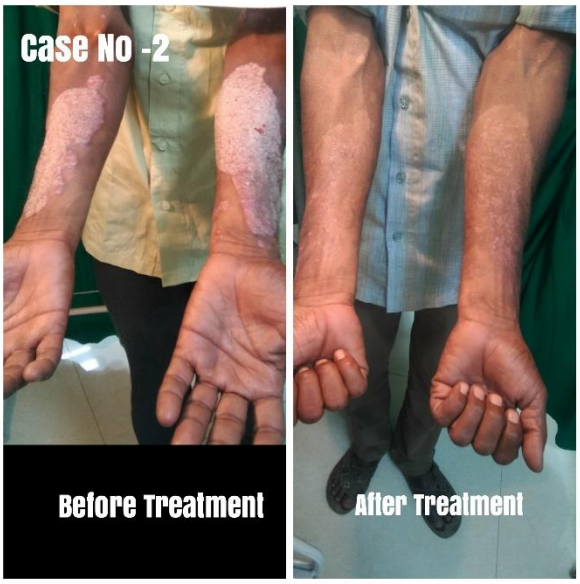

Fig.2

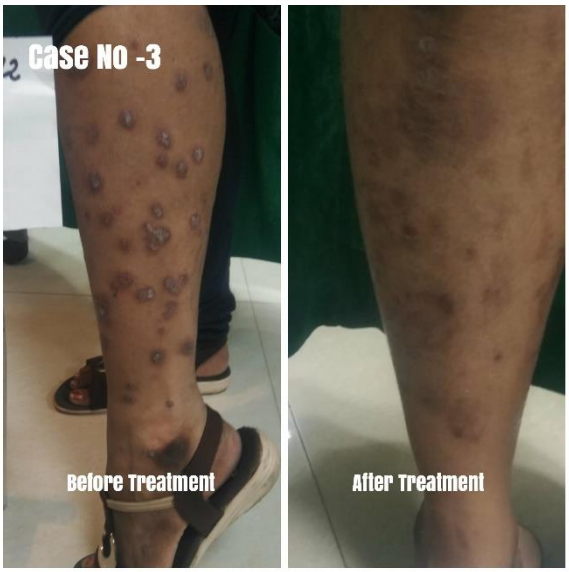

Fig.3

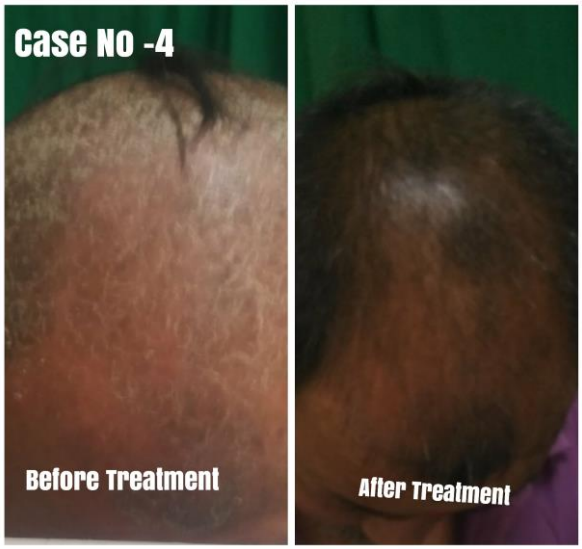

Fig.4

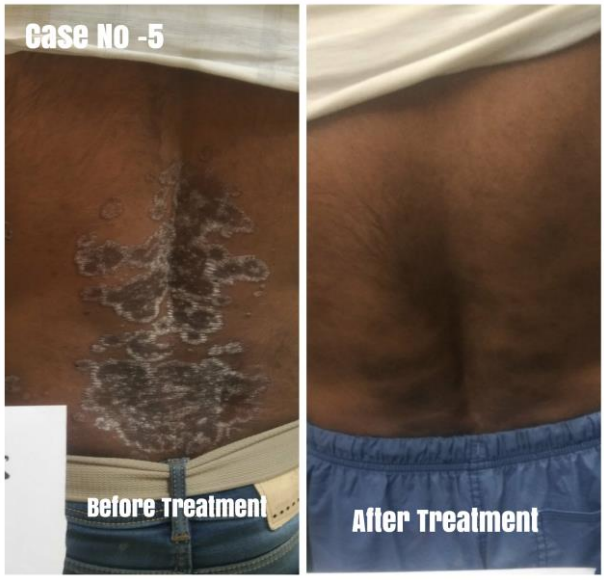

Fig.5

Case 3: A 22 years old Indian female student came to the outpatient department with chief complains of (1) Itching (2) Erythema (3) Induration /Thickness (4) Scaling followed by pinpoint lesion since last 9 months. The first lesion appeared on the head which gradually increased all over the body. She took some allopathic medicine for 6 months. No significant past-history or family-history

Case 4: A 40 years old Indian male banker came to the outpatient department with chief complains of (1) Itching (2) Erythema (3) Induration /Thickness (4) Scaling followed by pinpoint lesion from past 3 years. First lesions appeared on leg following the history of trauma which gradually spread to all over the body. History of relapse present without treatment. No significant past or family history. He took oral and systemic steroids for the last 2 years.

Case 5: A 30 years old Indian male painter by profession came to the outpatient department with chief complains of (1) Itching (2) Erythema (3) Induration /Thickness (4) Scaling followed by

pinpoint lesion since last 7 years. First lesions appeared on the knee which gradually spread to all over the body. History of relapse present without treatment. He took 1-year allopathic medicine and 1-year Ayurvedic medicine but he did not get satisfactory results. No significant past or family history.

In all cases vital signs and auscultatory findings were normal. No pathology was found during systemic examinations. Complete hemogram, liver function test, kidney function test, complete urine examination was carried out which were found to be within normal limits.

Before starting treatment, patients were instructed to terminate all type of previous medications. They were demonstrated and well trained to carry out the therapy protocol at home for the study duration.

OUTCOME MEASURES

The condition of each patient was assessed at 0, 15, 30, 45, 60, 75 and 90 days of treatment by Psoriasis Area and Severity Index (PASI) scores. Digital photographs for comparison were taken on 0 and 90 days (before and after treatment for 12 weeks). PASI score ranges from 0-72, with lower scores indicating less severe symptoms and a smaller area of coverage. Clinical improvements were recorded every fortnightly with PASI Scoring system. PASI Scores before enrollment and after 12 weeks of treatment were calculated to see the efficacy of study drugs.

Case Serial No.	PASI Score before treatment	PASI Score after treatment	Percentage of PASI reduction
1	25.5	3.1	87.84%
2	23.7	6	74.68%
3	13.8	4.1	70.29%
4	18.7	1.5	91.98%
5	22.1	1.6	92.76%

Table 3.

Psoriasis Area and Severity Index (PASI) scores denote an objective method to assess severity of psoriasis. It includes body surface area, erythema, induration and scaling [22-24]. It varies from 0.0 to 72.0 with higher score denoting more severe disease. Four sites of affection, the head (h), upper limb (u), trunk (t) and lower limbs (l) are scored separately. Three parameters (erythema, induration and desquamation) are graded on a severity scale of 0 to 4, where 0 = nil, 1 = mild, 2 = moderate, 3 = severe and 4 = very severe. The area wise percentage involvement of the involved sites is calculated as: 1 = less than 10% area; 2 = 10- 29%; 3 = 30-49%; 4 = 50-69%; 5 = 70-89%; and 6 = more than 90%.

The final formula for the PASI score is (Fredriksson and Pettersson 1978; L. Jean, Joseph L., and Rapini 2008; PSORIASIS AREA AND SEVERITY INDEX (PASI) WORKSHEET n.d.):

PASI = 0.1 (Eh + Ih + Dh) Ah + 0.2 (Eu + Iu + Du) Au + 0.3 (Et + It+ Dt) At + 0.4 (El + Il + Dl) Al

RESULTS

PASI score in these patients reduced at an average of 2 weeks post-treatment. The PASI score reduced in these five cases during the course of Unani treatment and is shown in Table-3. Complete relief in symptoms of patients such as itching, erythema, thickness/indurations, and scaling was also observed after 2 and 4 weeks of treatment with Majoon Mundi and Qairooti Karnab.

Case No.	Itching before treatment	Itching after treatment	Erythema before treatment	Erythema after treatment	Induration before treatment	Induration after treatment	Scaling before treatment	Scaling after treatment
1	2	0	3	0	2	0	3	0
2	3	0	2	1	3	1	3	0
3	2	0	2	0	2	1	3	0
4	3	0	2	0	2	0	3	0
5	3	0	3	1	2	0	3	0

Table 4.

Complete hemogram, liver function test, kidney function test, complete urine examinations were carried out after 3 months. There were no significant changes in the various safety parameters assayed over the study period. This suggests that Majoon Mundi is non-toxic to the liver, kidneys and hemopoietic system.

DISCUSSION

Psoriasis is a common skin problem affecting 1-2% of the world population. This study was conducted to assess the safety and efficacy of two pharmacopeial Unani formulations (Majoon Mundi and Qairooti Karnab) in the management of psoriasis.
Study observations demonstrated the efficacy of Majoon Mundi and Qairooti Karnab in the management of psoriasis. The exact mechanism of action of Majoon Mundi and Qairooti Karnab in psoriasis is unknown. However, it may be due to the anti-pruritic activity of mom (wax) and Roghan-e-Gul (Rosa Damascus) in reducing itching and also blood purifying property of Mundi (Sphaeranthus indicus), Shāhtra (Fumaria officinalis) and Halela Siyāh (Terminalia chebula (Alī. 1984; Ansari et al. 2017; M. 1985).

The most probable reason behind the effect of drugs on epidermal thickening (psoriatic lesions) appears to be the anti-inflammatory activity of Aṣl al-Sūs (Glycyrrhiza glabra), Luab-e-Gul-e-Khaṭmi (Althea officinalis), Āab-e-Shaljam (Brassica repa), Āab-e-Chuqandar (Beta vulgaris) and emollient activity of mom (wax) and Aṣl al-Sūs (Glycyrrhiza glabra)(Ghanī 2011; M. 1985). The disappearance of the Auspitz sign is probably due to siccative action (drying agent) of mom (wax) and hemostatic property of Āmla Khushk (Emblicaofficinalis) and Luab-e-Gul-e-Khaṭmi (Althea officinalis).

The improvement in clinical characteristics of psoriatic lesions reveals the efficacy of Majoon Mundi and Qairooti Karnab due to anti-inflammatory activity of constituent herbal medications. An antipsoriatic drug targeting the epidermis is supposed to restore skin homeostasis by suppressing keratinocyte hyperproliferation, abnormal differentiation, or both.

CONCLUSION

It is concluded that Majoon Mundi and Qairooti Karnab which were evaluated in this study for the treatment of psoriasis appeared to be safe, non-toxic and effective clinically. However, further studies with larger sample size and long-term follow up should be carried out to establish a possible cure of psoriasis.

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None

CONFLICT OF INTEREST

The authors have no conflicting financial interests.

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