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THERAPEUTIC EVALUATION OF A TOPICAL UNANI FORMULATION IN PATIENTS WITH *QŪBĀ* (DERMATOPHYTOSIS): A CASE SERIES

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ABSTRACT

Introduction

Qūbā (Dermatophytosis/ Ringworm) is a superficial chronic fungal infection of the skin caused by dermatophytes. It is a common cause of skin disease worldwide, especially in tropical areas. The three main genera of dermatophyte fungi that affect humans are *Trichophyton*, *Microsporum* and *Epidermophyton*. Tinea corporis occurs on the trunk and extremities, and usually presents with typical annular or circular lesions, vesicular or scaly, itchy papules with erythematous border and central clearing, and sometimes oozing. The diagnosis is confirmed by microscopy of skin scrapings using 10% KOH preparation or by fungal culture.

Methodology/ Case Presentation

We had four cases of *Qūbā* (Dermatophytosis), presenting with itching, erythema, scaling, and central clearing with peripheral raised margins of the glabrous skin. KOH mount examination of skin scraping, and haematological & biochemical investigations were performed before and after treatment. *Marham Kharish Jadeed* was topically applied on the skin lesions for a period of 29 to 51 days.

Discussion

After 29 to 51 days of topical application of *Marham Kharish Jadeed*, the symptoms and signs of *Qūbā* (Dermatophytosis) were subsided, and KOH mount examination became negative revealing the efficacy of the study drug. All the patients were having values of their haematological and biochemical investigations within normal limits after treatment, showing the safety of the study drug.

Conclusion

The local application of *Marham Kharish Jadeed* was found effective in Dermatomphytosis, suggesting its antifungal activity. No adverse effects were seen during study, and no recurrence of the lesions was observed after treatment. However, further study with larger series and longer follow-up is required.

KEYWORDS: Dermatomphytosis, *Qūbā*, *Marham Kharish Jadeed*, KOH mount

INTRODUCTION

Dermatophytosis is a superficial fungal infection of the skin, which most commonly occurs in tropical and sub-tropical countries like India¹. According to WHO, the occurrence of dermatophytic infection has been found 20-25% in the world. The variability of incidence has been changed due to the climatic condition across the world¹. Dermatophytic infection belongs to 3 asexual genera *Trichophyton*, *Microsporum*, *Epidermophyton*^{2,3,5,6}. According to sites affected, dermatophytoses are classified into *Tinea capitis* (head), *Tinea barbae* (beard and moustache), *Tinea corporis* (trunk & limbs), *Tinea cruris* (groin), *Tinea pedis* (foot), *Tinea manuum* (hand), *Tinea unguium* (nails), *Tinea faciei* (face) and *Tinea incognito* (steroid modified). *Tinea corporis* is reported to be highly prevalent^{2,3,4,5}. The main clinical features are typical lesion usually annular or circular, with erythematous border, vesicular or scaly, & central clearing, itchy papules and sometimes oozing^{2,3,7}.

In Unani System of Medicine, *Qūbā* is defined as a type of roughness or scaly skin, which is black or red in colour. It is caused by acrid pungent fluid mixed with black bile, which is more viscous than the humour responsible for scabies.

Jālīnūs (129-200 AD) considered as the physician of antiquity after Hippocrates described causes and treatment of *Qūbā*, and classified it into acute and chronic types⁸. Other types of *Qūbā* described in Unani medicine are *Qūbā Sā'ī* (creeping dermatophytosis), which is spreading and migrating in nature; and *Qūbā Wāqif* (stationary dermatophytosis), which is stationary in nature.

Avicenna (980-1037 AD) in his book 'the Canon of Medicine' says, *Qūbā* and *Dād* are synonyms. According to Avicenna, he did not find any difference between *Qūbā* and *Sa'fa*. On the basis of humours, it is a melancholic disorder firstly and added some after that, may be sanguineous and phlegmatic too⁹.

Rabban Ṭabarī (783-858 AD) in his famous book *Firdaws al-Ḥikma fi'l Ṭibb*, described the causes and treatment of *Qūbā* according to humoral theory¹⁰.

Qūbā has been treated by eminent Unani physicians since antiquity. There are so many topical formulations being used in *Qūbā*, i.e., *Marham Kharish Jadeed*,^[11,12] *Marham Qūbā*,^[11] *Habb-e-Qūbā* ^[11], etc.

Among these compound formulations, *Marham Kharish Jadeed* has been extensively used for the management of *Qūbā*, but till date its efficacy has not been evaluated on scientific parameters. We treated four patients with a compound Unani drug of topical application, *Marham Kharish Jadeed*, which was applied on the skin lesions for therapeutic evaluation of its efficacy and safety in patients with *Qūbā* (Dermatophytosis). A written informed consent was obtained from all individual participants included in the study. All the cases were advised to:

- avoid non-vegetarian, sea food, brinjal, peanuts, etc.
- avoid sweating or strenuous exercise as much as possible
- put cotton clothes on dried body after bath
- change the clothes daily

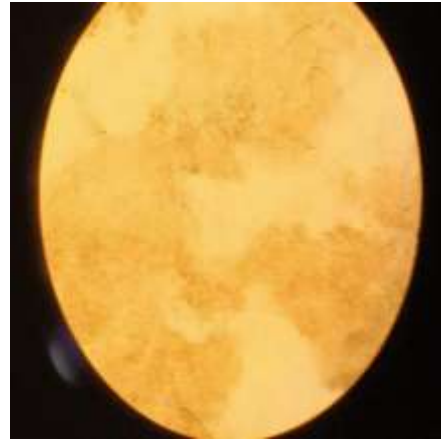
Case Presentation

Case 1

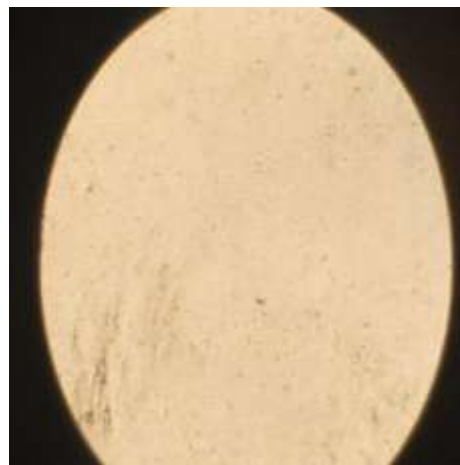
A 20-year-old male patient attended general OPD of CRIUM, Hyderabad on 20.09.2018 with the chief complaints of a dry reddish lesion since last one month. Patient did not have any past history of hypertension, diabetes mellitus, tuberculosis, or thyroid disease. The lesion size was approximately 5 cm by 4 cm and accompanied with intense itching. On inspection, the lesions were oval in shape, 3 in number on leg and armpit. Borders were well-defined with rough surface. Lesion was blackish, scaly with central clearing.

Skin samples were taken by scraping with the dull edge of a scalpel outward from the advancing margins of a lesion, and potassium hydroxide (KOH) mount examination of scrapings for fungal hyphae was performed before and after treatment. A direct KOH revealed thin hyaline septate hyphae. At baseline, microscopic examination of skin scrapings treated with KOH revealed septate and branching fungal hyphae.

Marham Kharish Jadeed was applied topically twice daily for 51 days (20.09.2018 to 09.11.2018). After 51 days of therapy, the lesion was cleared completely and KOH examination revealed no hyphae in skin scraping.



Before treatment



After treatment

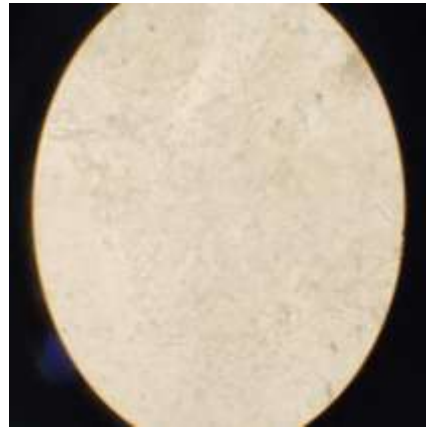
CASE 2

A 19-year-old male patient attended general OPD of CRIUM, Hyderabad on 25.09.2018 with the chief complaints of a dry reddish lesion since last seven months. Patient did not have any past history of hypertension, diabetes mellitus, tuberculosis, or thyroid disease. The lesion size was approximately 3 cm by 3 cm and accompanied with intense itching. On inspection, the lesions were oval in shape, 6 in number on leg, knee, neck, trunk and lower abdomen. Borders were well-defined with rough surface. Lesions were blackish, scaly with central clearing.

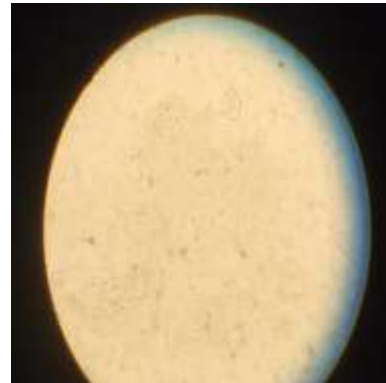
Skin samples were taken by scraping with the dull edge of a scalpel outward from the advancing margins of a lesion, and potassium hydroxide (KOH) mount examination of scrapings for fungal hyphae was performed before and after treatment. A direct KOH

revealed thin hyaline septate hyphae. At baseline, microscopic examination of skin scrapings treated with KOH revealed septate and branching fungal hyphae.

Marham Kharish Jadeed was applied topically twice daily for 6 weeks (25.09.2018 to 05.11.2018). After 42 days of therapy, the lesion was cleared completely and KOH examination revealed no hyphae in skin scraping.



Before treatment



After treatment

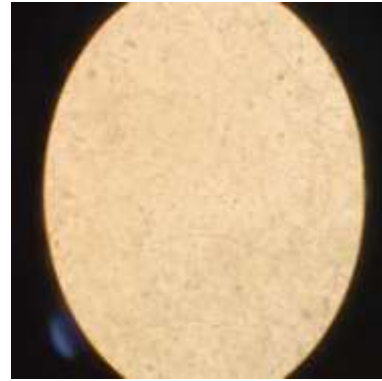
CASE 3

A 45-year-old male patient attended general OPD of CRIUM, Hyderabad on 11.10.2018 with the chief complaints of a dry reddish lesion since last two months. Patient did not have any past history of hypertension, diabetes mellitus, tuberculosis, or thyroid disease. The lesion size was approximately 5 cm by 3 cm and accompanied with intense itching. On inspection, the lesions were oval in shape, 3 in number on leg, neck and trunk. Borders were well-defined with rough surface. Lesions were reddish and blackish, scaly with central clearing.

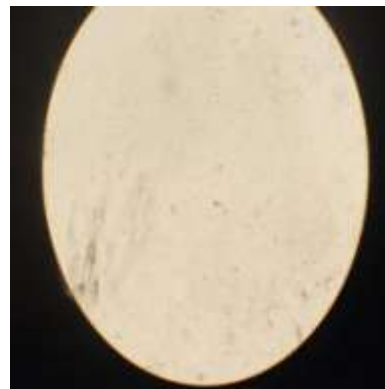
Skin samples were taken by scraping with the dull edge of a scalpel outward from the advancing margins of a lesion, and potassium hydroxide (KOH) mount examination of scrapings for fungal hyphae was performed before and after treatment. A direct KOH

revealed thin hyaline septate hyphae. At baseline, microscopic examination of skin scrapings treated with KOH revealed septate and branching fungal hyphae.

Marham Kharish Jadeed was applied topically twice daily for 29 days (11.10.2018 to 09.11.2018). After 29 days of therapy, the lesion was cleared completely and KOH examination revealed no hyphae in skin scraping.



Before treatment



After treatment

CASE 4

A 48-year-old male patient attended general OPD of CRIUM, Hyderabad on 05.10.2018 with the chief complaints of a dry reddish lesion since last six months. Patient did not have any past history of hypertension, diabetes mellitus, tuberculosis, or thyroid disease. The lesion size was approximately 10 cm by 8 cm and accompanied with intense itching. On inspection, the lesions were circular in shape, 2 in number on neck and shoulder. Borders were well-defined with rough surface. Lesions were reddish, scaly with central clearing.

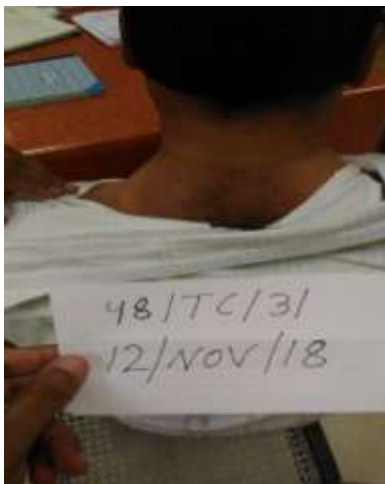
Skin samples were taken by scraping with the dull edge of a scalpel outward from the advancing margins of a lesion, and potassium hydroxide (KOH) mount examination of scrapings for fungal hyphae was performed before and after treatment. A direct KOH

revealed thin hyaline septate hyphae. At baseline, microscopic examination of skin scrapings treated with KOH revealed septate and branching fungal hyphae.

Marham Kharish Jadeed was applied topically twice daily for 39 days (05/10/2018 to 12/11/2018). After 39 days of therapy, the lesion was cleared completely and KOH examination revealed no hyphae in skin scraping.



Before treatment



After treatment

DISCUSSION

Qūbā (Dermatophytosis) is a chronic fungal infection of the skin, and it is well documented in Unani classical literature. Serious consequences are uncommon; however, the illness may be disfiguring and uncomfortable, especially when the lesions are widespread. The prevalence of dermatophytosis is about 27.6% worldwide of all

skin infections and tinea corporis (78.1%) is the commonest clinical presentation (Mishra, *et al* and Goldstein, *et al*).

In conventional medicine, the drugs are available for the treatment of dermatophytosis, but they have various adverse effects, and relapse also occurs. In Unani System of Medicine, many herbal formulations are used, but there is a need to prove the efficacy of drugs on scientific parameters. So, we planned to conduct the clinical study for evaluation of the safety and efficacy of a topical Unani formulation, *Marham Kharish Jadeed* in the management of *Qūbā* (Dermatophytosis).

This study was conducted on tinea corporis at Central Research Institute of Unani Medicine, Hyderabad. Cases were clinically diagnosed and confirmed by direct microscopy of skin scrapings treated with KOH. This case series shows that tinea corporis is relatively common and often presents with typical clinical characteristics. After 29-51 days of topical application of *Marham Kharish Jadeed*, the symptoms and signs of *Qūbā* (Dermatophytosis) were subsided, and KOH mount examination became negative revealing the efficacy of the study drug. All the patients were having values of their haematological and biochemical investigations within normal limits after treatment, showing the safety of the study drug. The results of this case study reveal that *Marham Kharish Jadeed* possesses antifungal activity, and may be used in the treatment of *Qūbā* (Dermatophytosis). This antifungal effect may be due to presence of *Lawsonia inermis*¹⁴. However, further studies with large sample size need to be done, so that the complete cure for the disease can be achieved. Moreover, reverse pharmacology study should also be conducted for PK, PD and to assess the Mechanism of action.

CONCLUSION

The local application of a Unani formulation, *Marham Kharish Jadeed* was found effective in the treatment of *Qūbā* (Dermatophytosis), suggesting its antifungal activity. The drug was well-tolerated and no adverse effects were seen during the course of the study. After completing the duration of study, patients did not complain of the recurrence of lesion. However, further study with larger series and longer follow-up is required to be done, so that the complete cure for the disease can be achieved.

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