

# FREQUENCY OF TINEA INCOGNITO AMONG RING WORM INFECTIONS AND HEALTH SEEKING BEHAVIOR OF THESE PATIENTS

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## ABSTRACT

**Background:** Ring worm infections are common in community and may be maltreated with steroids resulting in delay in proper diagnosis and treatment. **Objective:** To determine the frequency of tinea incognito among the ring worm infections of skin AND health seeking behavior of these patients. **Methodology:** This cross sectional study was conducted at Dermatology Outdoor of Sheikh Zayed Medical College Hospital Rahim Yar Khan from 1<sup>st</sup> March to 30<sup>th</sup> April 2017. A total of 170 patients of ring worm infections of skin were included in this study through convenient sampling. These patients were asked about the use of topical steroids through a pre-designed performa containing information about patients, diagnosis, type & duration of treatment and its prescriber. The data was entered and analyzed by using SPSS version 20. **Results:** Out of total 170 patients, 68(40%) has tinea incognito. Among these 26(15.29%) were treated by general practitioner, 30(17.6%) by relatives/friends, 3(1.8%) by Pharmacist and 9(5.3%) did self-medication. **Conclusion:** Use of topical steroids is quite common in ringworm infections of skin with poor health seeking behavior of these patients resulting in misdiagnosis and delay in proper treatment. Community should be educated in health seeking behavior for skin disease.

**Keywords:** Ringworm infection, Tinea Incognito, Health seeking, Skin infection.

## INTRODUCTION

A ringworm infection, modified by topical and/or systemic corticosteroids, given mistakenly or for co-existing pathology is known as tinea incognito.<sup>1</sup> Application of even as mild as 1 % hydrocortisone can cause this condition.<sup>2</sup> It may mimic a number of other dermatological conditions like lupus erythematosus, contact dermatitis, psoriasis and eczema.<sup>3,4</sup> This similarity further delays proper diagnosis and treatment of this condition.<sup>5,6</sup>

The pathogenesis of the condition is presumed to be a steroid modified response of the host to fungal infection rather than a direct pharmacological effect of the drug.<sup>7</sup> Corticosteroids being immunosuppressives decreases the resistance to infection, and suppress the inflammatory reaction. The infection therefore spreads unchecked and acquires a form quite different from clinical ring form.<sup>8</sup> The objective of this study was to assess the frequency of tinea incognito among ringworm infections of skin AND health seeking behavior of these patients.

## METHODOLOGY

This cross-sectional study included a total of 170 patients who consulted the department of Dermatology at Sheikh Zayed Medical College/Hospital, Rahim Yar Khan from 1<sup>st</sup> March

to 30<sup>th</sup> April 2017. After seeking permission from Institutional Review Board, patients of both sexes and all ages presenting with history and clinical features suggestive of ringworm infection were included. Fungal infection of nails and skin infection caused by yeast were, however, excluded. The diagnosis was based on clinical history and examination and a formal consent for being study participant was taken from each patient. Patients were interviewed directly by the dermatologist and data entered in a predesigned Performa containing information about age, sex, diagnosis, body area involved, type and duration of treatment and information about prescriber i.e. consultant dermatologist or general practitioner, pharmacist, relatives/ friends or patient himself/herself. The data was entered in SPSS version 20 and analyzed.

## RESULTS

This study included 170 patients suffering from ringworm infections of skin. The mean age of patients was 30±14 years. Of these 93(54.7%) were male and 75(46%) were females. Mean duration of disease was 3.4±9.1 months. Out of 170 patients, 68(40%) patients has tinea incognito. (Figure I)

Of all patients suffering from ringworm infections 102 (60%) got treatment from dermatologist, 26(15.29%) from general practitioner, 3(1.8%) from pharmacist, 30 (17.6%) from relative/friend and 9(5.3%) self-medicated themselves. (Table I)

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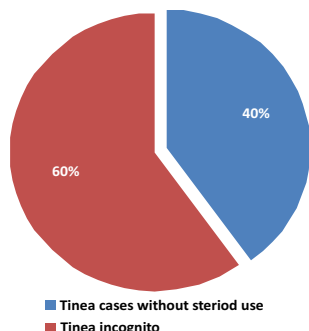
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Received: 20-04-2017

Accepted: 5-05-2017

**Figure I: Frequency of tinea incognito among patients of ringworm infections of skin****Table I: Health care provider in patients with ringworm infection of skin.**

Health Care Professional	No (%)
Dermatologist	102(60)
General practitioner	26(15.29)
Relatives / Friends	30(17.6)
Pharmacist	3(1.8)
Self-medication	9(5.3)

In these patients, whole body was involved in 52 (30.5%), genital area in 38 (22.3%), face and limbs each in 28 (16.4%) and head in 24 (14.1%) patients. (Table II)

**Table II: Body area involved in patients having ringworm infection**

Area of Body Involved	No (%)
Whole body	52 (30.5)
Genital area	38 (22.3)
Face	28 (16.4)
Limbs	28 (16.4)
Head	24 (14.1)

## DISCUSSION

The use of topical steroids in ringworm infection of skin is quite common that results in loss of some of the characteristic features of fungal infections due to suppression of inflammation. Symptomatic relief due to anti-inflammatory and immunosuppressive effects of these drugs satisfies the patient to continue using the drug.

This study included 170 patients of ringworm infections. Out of these 93 (54.7%) were male, 75(46%) were female with mean age of 30±14 years. These results are comparable with some variations in a study conducted in India where there were 60% females with 20-29 years of age most commonly involved for the misuse of topical corticosteroids.<sup>8</sup> Amongst 170 cases, 68(40%) has tinea incognito, which is comparable to a study<sup>9</sup> in

which percentage of tinea incognito was 39.1%. The frequency of involvement of different body areas in our study was more or less similar with some minor variations in study conducted at Bialystok.<sup>9</sup> In a study conducted in India, face was the most commonly affected site.<sup>10</sup>

Among 68(40%) patients suffering from tinea incognito; 42 (24.7%) sought advice from non-professionals i.e. from pharmacist, relative/friend and self-medicated themselves reflecting poor health seeking behavior of the society. In a study conducted in India pharmacist were responsible for 78 % of tinea incognito cases. Another study conducted in India, study that friends and family were responsible in 32.2% of patients for misuse of topical steroids.<sup>9</sup> General practitioners treated 26(15.29%) patients with steroids reflecting the importance of proper training of primary care physicians in skin diseases.

## CONCLUSION

There is high frequency of tinea incognito among patients of ringworm infections of skin due to wrong diagnosis and inappropriate treatment reflecting poor health seeking behavior of patients hence proper training of primary care physicians in skin disease, is recommended. Community should to educated in health seeking behavior of skin diseases.

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