Effectiveness of homoeopathic treatment in resolving tinea corporis: A case report

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Abstract
Tinea is a superficial fungal infection of the skin which is caused by T. rubrum. It most commonly manifests on the trunk, legs, back, and arms and is transmitted by direct contact with an infected person. A 17 years old female came with complaints of itching and discoloration in the right elbow joint since 3 month. A complete case history was taken and Tuberculinum 200 C potency was prescribed based on the totality of symptoms through the process of repertorisation and case was followed for about two months with the photographic evidence, it shows the utility of Homoeopathic medicine in Tinea corporis.

Keywords: Tinea corporis, homoeopathy, tuberculinum 200 C

Introduction
Tinea is otherwise known as ‘ringworm’ is a superficial mycotic infection. It is more common throughout the world with prevalence of 20- 25% [1]. Dermatophytes are caused by a group of filamentous fungi known as dermatophytes or ringworm fungi [2]. Dermatophytic infections in humans are primarily caused by three genera: Trichophyton, Microsporon, and Epidermophyton. Specifically, Trichophyton rubrum is the prevalent dermatophytic infection among the Indian population [3, 4]. Dermatophytes are categorized as geophilic, zoophilic, or anthropophilic based on their typical habitats in soil, animals, or humans, respectively. They are commonly differentiated by the site of infection, tinea capitis (head), corporis (body), cruris (groin region), pedis (feet), manuum (hands), faciale (face), barbæ (beard region), and tinea unguium (nails) [2]. They typically exacerbate during the summer and rainy seasons but often resolve spontaneously in the winter months. Tinea corporis is a fungal infection of the body which is caused by Dermatophytes [3, 5]. It is characterized by circinate eruptions, itching, burning, soreness and secondary infections. It can occur in either sex or in any age and is bound to have effect on quality of life of patients [5] and thus requires appropriate intervention and management. The following case report is about a patient who was suffering with tinea corporis for 3 months. Inspite of taking alternative treatment for 1 month, there was no marked changes. After taking Homoeopathic medicine, her complaints was improvised significantly with no reoccurrence. This shows the efficiency of Homoeopathic in the treatment of fungal infections.

Epidemiology
Fungal skin conditions ranked as the most widespread skin ailments worldwide, accounting for 10.09% of cases and making a notable 0.17% contribution to the overall burden of disability-adjusted life years (DALYs) associated with skin disorders [6]. Globally it was ranked 4th in the occurrence of disease with 2.1 billion cases when contrasted to other diseases and injuries [7]. 47% cases are caused by Trichophyton rubrum. Its higher occurrence are seen in tropical and subtropical areas. In India, tinea corporis is accountable for up to 88% of cases. There is no sex predominance. Infection can occur from direct or indirect contact with skin and scalp lesions of infected individual or animals [8]. Excessive heat, increased humidity, and tight fitted clothing are associated with a higher likelihood of experiencing more severe and recurrence of disease [9]. Certain populations, particularly children, can exhibit a higher susceptibility to tinea corporis. Among prepubertal children, tinea capitis and corporis stand out as the most prevalent infections [10]. Zoophilic contaminations get communicated through contact with pet animals such as cats and dogs.
The immunocompromised person also exhibits an increased occurrence in emerging tinea corporis [11].

Etiology
Tinea corporis is mostly caused by *Trichophyton rubrum*, *T. tonsurans*, and *Microsporum canis*. Globally, *T. rubrum* stands out as the predominant cause of dermatophytosis. [12]

Tinea corporis resulting from tinea capitis is frequently attributed *T. tonsurans* [13]. Patients who have contact with cats or dogs are commonly infected with *Microsporum canis*. Tinea corporis gladiatorum can present in athletes particularly wrestlers who have direct skin contact [14].

Pathophysiology
Mannans found in the cell walls of certain dermatophytes, such as *T. rubrum*, possess immuno modulatory effects [15]. This allows the fungus to attach to the skin without premature shedding, facilitating its invasion. The responsible fungus can also produce certain enzymes such as proteases which degrade keratin; serine-subtilisins initiate protein digestion by nucleophilic attack on peptide bonds via a serine residue at the active site and keratinases which penetrate the keratinized tissue. These enzymes collectively enable the fungus to penetrate the outermost layer of the skin and spreading outward [16]. Typically, infection is cutaneous and remains confined to the external, non-living, epidermis of the skin. These infections trigger skin inflammation through the release of their metabolic byproducts into the skin layers and by provoking a delayed hypersensitivity response [1]. These fungi have a preference for keratin-rich substances and typically inhabit dead keratinaceous material, leading to inflammation in the skin, hair, and nails.

Clinical features
The incubatory span is 1-3 weeks. It is characterized as a clearly defined, distinctly bordered, oval or circular, mildly erythematous, scaly patch or plaque with an elevated edge. Initially, it presents as a scaly spot that expands outward and clears at the center, resulting in a distinctive ring-shaped lesion, giving rise to the term ‘ringworm.’ The border is anular and irregular; sometimes it can be papule, vesicle or pustule. Mild itching is common. In adults, it occurs on exposed area of skin, while in children it appears on the trunk [17].

Diagnosis
The diagnosis is most often clinical, especially if the lesion is typical. A well-demarcated, sharply circumscribed, mildly erythematous, annular, scaly plaque with a raised edge and central clearing is the characteristic of tinea corporis [2].

Lab investigation
Direct microscopic examination of fungal scrapings provides immediate confirmation of fungal infection. Scrape the edge of a lesion with a scalpel and collect the scales in a glass slide. Add a drop of 10% potassium hydroxide and cover with a cover slip and apply heat gently, but not to boiling. Examine under low power of microscope (x10 magnification) after the slide cools. Dermatophytes appear as long septate and branched hyphal filaments without constriction at the branching points. Fungal species can be identified by culture in Sabouraud’s medium [5].

Complications
Tinea corporis is contagious and potentially leading to notable health impacts. Scratching and skin abrasion can lead to secondary bacterial infections. Additionally, post-inflammatory changes such as hypopigmentation and hyperpigmentation may occur. Rarely, psoriatic flares may precipitated by tinea corporis [13].

General management
Avoid physical contact; refrain from sharing personal items and clothes with an affected individual. Wear clothes that have been dried in the sunlight. Identify and provide treatment for potential sources of infection like pets. Screening for family members should be done and also asymptomatic carriers must be traced and treated [2].

Case report
A case of 17 years old female, non-vegetarian, who is studying B.sc 1st year, belonging to middle socio economic family, came with the complaints of itching and circular patch in the right elbow joint since 3 months on and off.

History of presenting complaints
Patient was apparently healthy before 3 months. Complaints started gradually and causation was not known. Initially it is started as small reddish eruption in the right elbow joint with intense itching. Then gradually it appears as small circular patch and it get increasing in size. There is severe itching with burning sensation present. Itching leads to scratching. Worse more at night, after sleep better by oil application. She took alternative treatment for 1 month but temporary relief only and the complaints reoccur in the same region within 2-3 weeks.

Treatment history
Took alternative medicine for the presenting complaints for one month but temporary relief.

Family history
No similar family history.
Mother and father healthy.

Physical generals
Appetite - 3 times/day.
Thirst - Increased for large quantities of water.
Desire - Milk.
Stool - Regular once a day.
Perspiration - Generalized on exertion.
Sleep- disturbed due to itching. 6 hrs./day.
Thermal - Chilly.

Mental generals
She is good in her studies. She desires company and shares her problem with friends. She is very sensitive in nature. Gets anger easily when someone scolds her and she takes time to overcome the anger. She is having fear of cats and doesn’t allow it near her. Due to fear she refuses to visit her relative’s home who is having cat as a pet. She loves travelling and always wants to go to new places and to explore it.

Local examination
On examination of skin
Inspection: Redness of skin, circular patch in anterior part
of elbow, annular margin with scaly border and reddish discoloration. Raised margin with central clearing. No bleeding or fluid filled vesicles.

**Palpation:** No tenderness, no local warmth.

**Analysis of case**

**Mental generals.**

Fear of cats ***.

Desire – travelling**.

**Physical generals**

Desire - Milk.

Thirst - Large quantities for water.

**Particulars**

Itching in the right elbow joint

Eruption is circular in nature

< After sleep, Night, after scratching > oil application.

**Reportorial analysis**

**Follow up**

<table>
<thead>
<tr>
<th>Date</th>
<th>Changes</th>
<th>Follow up</th>
</tr>
</thead>
<tbody>
<tr>
<td>21/11/2022</td>
<td>Itching - SQ, eruption slightly reduced, redness slow improved</td>
<td>Tuberculinum 200/1 dose Rubrum 30 / TDS for 10 days.</td>
</tr>
<tr>
<td>1/12/2022</td>
<td>Eruptions better, itching and redness slight relieved</td>
<td>Rubrum 30 / TDS for 14 days</td>
</tr>
<tr>
<td>15/12/2022</td>
<td>Eruptions better, itching, redness - SQ</td>
<td>Tuberculinum 200/1 dose Rubrum30/TDS for 10 days</td>
</tr>
<tr>
<td>26/12/2022</td>
<td>Itching and eruption better, redness reduced</td>
<td>Phytum 1 m / 1 dose Rubrum 30 / TDS for 14 days</td>
</tr>
<tr>
<td>9/1/2023</td>
<td>Eruptions and itching further relieved</td>
<td>Phytum 1 m / 1 dose Rubrum 30 / TDS for 10 days</td>
</tr>
<tr>
<td>19/1/2023</td>
<td>Marked improvement in itching and eruption, no redness, tongue clear and moist.</td>
<td>Rubrum30/TDS for 14 days</td>
</tr>
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</table>

**Discussion**

Fungal infections can greatly influence one's quality of life. In the case of children, the societal stigma and emotional distress can have repercussions on their academic performance. It has also been documented to have adverse effects on patients' well-being which leads to reduced self-confidence, embarrassment, and social isolation [18]. In this instance, Tuberculinum was chosen after considering the
complete set of symptoms, and Sulphur was excluded as a remedy because Sulphur is suited for individuals with a hot disposition, whereas Tuberculinum is more appropriate for those who tend to feel chilly. Additionally, Tuberculinum exhibited a distinct preference for fearing cats and a strong desire for travel.

**Conclusion**

Homoeopathy is specialized system of medicine which treats the patient as a whole and not just the disease. In this case patient improved symptomatically gradually after prescription of Tuberculinum 200 in centesimal scale potency. This case shows the effective role of Homoeopathy in Tinea corporis through individualization.

**Conflict of Interest**

Not available

**Financial Support**

Not available

**References**

4. Davidson’s. Principles and Practice of Medicine. (23rd Ed.): Elsevier Ltd.