



Tinea Corporis Medicational treatment with clinical examination in Pakistan

Zaira Azhar¹, Mohsin Raza², Habibah Ishaq Hashmi³, Iqra Jabeen³, Aliya Ali³, Rida Shafiq⁴, Falak Sher² and Muhammad Waqar Mazhar^{5*}

¹Department of Medicine and Surgery, Federal Medical and Dental College, Islamabad, Pakistan

²Department of Medicine and Surgery, HITEC-Institute of Medical Sciences Taxila Cantt, Pakistan

³Department of Pharmacology and Therapeutics, HITEC, Institute of Medical Sciences Taxila Cantt, Pakistan

⁴Department of Medicine and Surgery, Sargodha Medical College, Pakistan.

⁵Department of Bioinformatics and Biotechnology, Government College University Faisalabad, Pakistan

Submission: April 01, 2024; **Published:** April 19, 2024

***Corresponding author:** Muhammad Waqar Mazhar, Department of Bioinformatics and Biotechnology, Government College University Faisalabad, Pakistan, email: waqarmazhar63@gmail.com

Abstract

Fungal infection spread worldwide due to the pets, Humid areas, damp and excess sweating, it's become more untreated disease in Pakistan by using excessive treatment, not consulting with doctors, self-medication these are the main reason. In this research we use medicational combinations to treat fungus on skin. Different lab tests were performed for the clinical diagnosis. The result shows that the lfts are the main focus in this disease. The elevation of ALT, AST, BIL, Alk. Phosphate, HCV, and HBV cause hepatic injury, terbinafine salt also raise lft's in human blood. To minimize the terbinafin effect on liver, silymarin 200 mg tab used for this purpose. After the 1month medication the fungus disappear from skin.

Keywords: Fungal infection; Tinea; Lft's; Dermatophyte; Fungal resistance

Introduction

Tinea Corporis also known as fungal infection on the body, including arms, neck, torso and legs. It's an emerging skin disease in Pakistan [1]. Dermatophyte can cause disease, but the pathogen varies due to geographically. In this disease the body has rash and ring like structure with hollow [2]. After rash in increase its circle. This disease is contagious but not a serious problem. Factors that may increase your risk include living in damp, hot, or humid areas, excessive sweating, participating in contact sports, wearing tight clothing, having a weak immune system, sharing clothing, bedding, or towels with others, and diabetes [3]. It mostly occurs in cool weather. Symptoms usually include a ring-shaped rash, red skin that is scaly or cracked, hair loss, and itchy skin. Symptoms may also vary based on where ringworm is located on your body [4,5]. A ringworm infection can spread in many direct and indirect ways, including: Person to person. animal to person (This occurs through direct contact with an animal that has ringworm [6]. Both dogs and cats can spread the infection to people. Ferrets, horses, rabbits, goats, and pigs can also spread ringworm to people), inanimate item to person (It's possible to get ringworm through indirect contact with objects, including the hair of a person with ringworm, bedding, clothing, shower stalls, and floors) [7], and soil to person (Rarely, a ringworm infection can spread through contact with affected soil for an extended amount of time) [8].

Methodology

49 Patient were treated with combination of medicine to treat. Blood samples were collected in CBC Vial and Gel vials. Their liver function test and Renal parameters were performed on Biochemistry automation analyzer LTM-9200. Complete blood picture was performed on Hematology Mindray 2800. TSH test was performed on Minividas, Viral marker was performed with chromatography technique. The meaning was collected with SPSS.

Results

The results showed that the ALT in the blood is 415. While the lowest is 43 and their mean value is 201. The highest AST in the blood is 297. While the lowest is 21 and their mean values are 147. The highest Biliurubin in the blood is 1.9. While the lowest is 0.7 and their mean values are 1.2. The highest alkaline phosphate in the blood is 479. While the lowest is 131 and their mean value is 317. Out of 49 patients, 39 patients have hepatitis C positive, while are negative. Out of 49, 2 are hepatitis B positive. Their renal parameter, CBC are normal. Their TSH falls in normal values. In Figure 1 the patient treated with this medicational combination its skin recovers from fungal infection. The medicational course continue for 1 month. Because excess use of the terbinafine salt damages your liver. The gap between medication enhance fungal

resistance (Tables 1, Table 2). For the treatment of fungal infection, Rigix tablet use for itching. Terbisan forte oral tablet effect on ring fungal infection from OD. The Travolan cream is used for applying to the affected area twice every day. In Pakistan, it's become more due to the excessive use of chicken, rice, eggs, and beef meat (Table 3).

Table 1: Clinical lab tests performed in patients.

Test	Lowest values	Highest values	normal values
ALT	43	415	<40
AST	21	297	<40
Billiurbin	1.2	1.9	0.6-1.1
Alk. Phosphate	131	479	70-138
Renal profile (Cre)	0.6	1.1	0.3-1.3
TSH	1.3	4.5	0.9-5.5

Table 2: Serology tests in patients.

Serology test	Positive	Negative
HCV	39	10
HBV	2	37

Table 3: Drug combination for treatment.

Drugs use for medication	Duration
Rigix tablet	1 Tablet before bed 10 days
Terbisan forte 250	1 tablet regularly 1 month
Isoconazole Nitrate+	apply on affected area 15 days
Diflucortolone valerate cream	



Figure1: The patient diagnosis is Tinea Corporis, and it's treated by Terbinafine 250, Rigix tablet, and Travolan cream.

Discussion

In this study, we examined that in most fungal cases LFTs and HCV have more. The liver enzyme not working properly can enhance the fungal infection growth. Terbinafine is an allylamine antifungal that inhibits squalene epoxidase, also called squalene monooxygenase, to weaken fungal cell walls by preventing the production of ergosterol and causing a buildup of squalene [9,10]. Terbinafine exhibits tissue distribution and a prolonged terminal elimination half-life, hence contributing to its prolonged duration of action. Since terbinafine overdose is uncommon, even at therapeutic doses, the therapeutic index is broad [11]. Liver function tests should be done on patients taking oral terbinafine before starting treatment to lower the risk of liver damage for the liver damage Silymarin 200mg tablet have more effect with combination to treat fungal infection [12].

Conclusion

In this study, fungal infection was treated with combination of medicine in 1 month. Terbinain has side effects on liver, so we should minimize the side effect by using Silymarin 200 mg Tablet twice a day. Patient with fungal infection visit their doctor as soon as possible for diagnosis. Don't misuse the medication and don't take medication yourself because it's the main reason for fungal resistance. In Pakistan, fungal resistance increases due to the medical store advice to patient. Be careful to take medicine from unregistered doctors.

References

- Nasir A (2010) Diseases associated with cutaneous barrier dysfunction: Basic science aspects and clinical perspectives. Toxicology of the Skin, CRC Press: 450

2. Gnat S, A Nowakiewicz, D Łagowski, P Zięba (2019) Host-and pathogen-dependent susceptibility and predisposition to dermatophytosis. *Journal of medical microbiology* 68(6): 823-836.
3. Achterman RR, White TC (2012) Dermatophyte virulence factors: identifying and analyzing genes that may contribute to chronic or acute skin infections. *International journal of microbiology*.
4. Segal E, Frenkel M (2015) "Dermatophyte infections in environmental contexts." *Research in microbiology* 166(7): 564-569.
5. Gnat S, D Łagowski, A Nowakiewicz (2020) Major challenges and perspectives in the diagnostics and treatment of dermatophyte infections. *Journal of applied microbiology* 129(2): 212-232
6. Moretti A, F Agnetti, F Mancianti, S Nardoni, C Righi, et al. (2013) Epidemiological, Clinical and zoonotic aspects. *G Ital Dermatol Venereol* 148(6): 563-572
7. Ibrahim M, Abdel-Latef G, Abdel-Rahim M, Aziz S (2021) Epidemiologic and molecular characterization of zoonotic dermatophytes from pet dogs and cats in Egypt. *Advances in Animal and Veterinary Sciences* 9(12): 2225-2233.
8. Pal M and Mahendra R (2017) "Dermatophytosis-A Highly Infectious Mycosis of Pet Animals." *International Journal of Livestock Research* 7(1): 1-7.
9. Sagatova A (2021) Strategies to Better Target Fungal Squalene Monooxygenase Fungi *J* 7: 49.
10. Oak AS, Baddley JW, Elewski BE (2018) "Systemic antifungals." *Biologic and Systemic Agents in Dermatology*: 425-450.
11. Li Y, Theuretzbacher U, Clancy CJ, Nguyen MH, H Derendorf (2010) Pharmacokinetic/pharmacodynamic profile of posaconazole. *Clinical pharmacokinetics* 49(6): 379-396
12. Yan J, Wang X, Chen S (2014) "Systematic review of severe acute liver injury caused by terbinafine." *International journal of clinical pharmacy* 36: 679-683.



This work is licensed under Creative Commons Attribution 4.0 License
DOI: [10.19080/JOJDC.2024.06.555680](https://doi.org/10.19080/JOJDC.2024.06.555680)

Your next submission with Juniper Publishers will reach you the below assets

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats
(Pdf, E-pub, Full Text, Audio)
- Unceasing customer service

Track the below URL for one-step submission
<https://juniperpublishers.com/online-submission.php>