



## Original Research Article

# Isolation of the Fungal Samples from the Patient's Skin in Vijayawada City Hospital, Andhra Pradesh, India

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## ABSTRACT

### Keywords

Skin infection, *Aspergillus* species, *Candida* species, Antifungal activity

25 fungal samples were collected from infected skin of reviewers patients to Vijayawada City Hospital, A.P., India for the purpose of isolating and diagnosing fungi, and included samples of skin peel. Microscopically models were examined after treatment with potassium hydroxide and then plated at the center of Alsabrod Duxtaros Agar genitive (mg / L 250)(streptomycine) then diagnosed fungi isolate and diagnose 19 species of fungi that were distributed to prosecutors fungus *Aspergillus* which is the most reluctant) 52.5% (The percentage of type *Aspergillus flavus* 21.1%), (and the proportion of type) *Aspergillus fumigates*) 15.7% (and the proportion of type) *Aspergillus niger*) (15.7% ,(followed by sex (Candida) and proportion (47.3%, (and the proportion of Candida was one of the type) *Candida albicans*) (36.8%, (and the proportion of type) *Candida. Tropicalis* 5.10. (Results examination pharmaceutical sensitivity to certain antibiotics tested against three types of fungi from *Aspergillus*, and two types of *Candida*, using a dilution series of all isolates were highly sensitive (100%) to anti fungal activity ketoconazole compared with other antibiotics tested (Miconazol, Griseofulvin)

## Introduction

Known infections fungi (Mycoses) as infections, chronic fact that fungus grows slowly and includes infections superficial fungal, skin, subcutaneous, systemic infections, fungal opportunistic The damage caused by fungi belonging mainly to the output of toxins and enzymes as raise sensitivity and penetrate the tissue directly (Matsumoto, 1996). Most fungi are opportunistic pathogens exploit the weakness of the immune system of the host and becomes as satisfactory in its people

with malignant tumors in his or her use chemotherapy to treat malignant tumors in his condition weakness of HIV infection. These fungi importance to human Health is skin fungal (dermatophyte), known as the fungi that term on keratinocytes skin material and cause human disease are Fungal infections occur is increasing at an alarming rate, the higher the superficial fungal infections prevalence rate turned Out to be 20-25% of the world's population has two fungal skin disease, which makes this

one of the most common forms of infection (Havlickova *et al.*, 2008). Fungal infections are extremely common in the tropical region and some are dangerous and even deadly. They produce a variety of injuries, ranging from superficial skin infection to invade the Internal device (systemic disease) (Patel *et al.*, 2010). This fungus has become a health problem, especially for people weakened immune. Skin infection due to the skin has become a major health problem affecting children adolescents and adult.

### **Materials and Methods**

In this study, it has been studied 25 cases of patients Mahlahalemradjaan hospital in the city of Vijayawada. It was the sampling Bosta medical sterile scalpel for skin peels from the injury was taking detailed history of the patient and clinical examination direct microscopic examination was conducted in 10% potassium hydroxide (KOH) in samples from the husks of the skin, and by placing a drop of clean glass slide solution with Some skin peels and covered with a lid slide and passed three times in a flame benzene lamp to accelerate the dissolving keratin and after a period of 15 minutes and after melting associated with the fabric and turn it into a soft and serene texture by potassium hydroxide solution pressure on the slide Bosta Loeb cover in order to crush the fabric and published in the form of a thin layer, and dab samples ( $\beta$  lacto phenol blue cotton), and this process facilitates Show fungal structures under a microscope using micro-magnification power and then to note the major strands of fungal spores and false or truth in positive samples.

It was isolated fungal pathogens on Sabouroud of dextrose agar (SDA), and streptomycin was added to prevent the growth of bacteria. The plates were

incubated for 3-7 days at 250C fungus and incubated for 48 hours at 37C and then were studied colonies (Barron, 1968; Ellis, 1971; Raper and Funnel, 1977).

### **Drug Sensitivity test for fungi**

This included the use of the test (Agar-well-diffusion method) was the measurement of effectiveness or inhibitory capacity of the three antibiotics fungal fungi isolated against a (Miconazole, Griseofulvin, Ketoconazole) (Gupte, 1999).

### **Preparation of antifungal**

The preparation of the foundation solution fungal antibiotic used and the concentration of 10,000 micrograms / ml and by the way (10) having been put 5 ml of material (Dmethylsovluxada) (DMSO) concentration of 100% in the tube sealed (Vail) was added to 50 mg of each Drug then shake the solution vigorously using Carburetor Rotor (Vortex mixer), and this is the basis for the solution concentration of 10,000 micrograms / ml then dilute solution was attended by a concentration of 1000 micrograms / ml of the base solution to an anti fungal and by adding 10 ml of solution (DMSO) concentration of 100% to 1 ml of the base solution concentration of 10,000 micrograms / ml, solution left under room temperature for 30 minutes before use, and after the previous preparations followed these steps.

1. Taking 0.2 mL of vaccine innate minutes using a sterile pipette (Micropipette) and posted on the center surface (ESDA) previously record in Petri dishes using a glass rod (Spreader) is a character (L) and sterilized with alcohol and flame. The dishes were left for 30 minutes in order to allow the vaccine to be absorbed innate by the middle.

2. Worked five drill diameter of 5 mm in the center inoculated by Saqib Corky, one of them represents a control (19).

3. 0.1 ml of fungal antibiotic solution was prepared in advance to each hole using sterile absorbent minutes (Micropipette), the dishes were incubated at 28° C for (2–5) days, Qatar has been measuring the inhibition of the growth area (Inhibition zone) in units of a millimeter (Prize *et al.*, 1990).

**Statistical analysis Statistical analysis**

Results were analyzed statistically using Chi-square (X2) Qi-square by 21 to test the morale of all transactions used in the study at the level of probability of 0.01.

**Results and Discussion**

Microscopic examination showed the direct results of the presence of fungal strands of

false and real budding spores. Included total of 25 samples total sample 0.10 a sample of female and 15 male sample, 19 fungi isolated a fungus shown in (Table 1) and ratios shown in the chart Alebana (I), and was *Candida* sex, *Aspergillus* prosecutors more races undecided), Test the sensitivity of fungi isolated innate tendency of some antibiotics measurement results (mm) diameters to discourage fungal growth areas of AGRO-quarters. As opponents showed Alkatokonasulfalh very few to prevent the growth of fungus tested the effectiveness against fungi *Aspergillus* direction (Miconazole, Griseofulvin) and appeared in the (table) and ratios in the chart (II).

This study constitutes dermatophytosis superficial and included a large group of patients attending hospital patients from Vijayawada, Andhra Pradesh, India. The temperature in these areas is very high most of the time.

**Table.1** Isolation of fungi from patient sample skin at city Vijayawada

Name of the fungi	growth inhibition zone (mm)		
	Miconazol	Griseofulvin	Ketoconazole
<i>Aspergillus flavus</i>	3	4	17
<i>Aspergillus. Fumigates</i>	0	2	6
<i>Aspergillus Niger</i>	10	11	18
<i>Candida albicans</i>	7	3	21
<i>Candida. Tropicalis</i>	2	5	8

**Table.2** Drug sensitivity test isolation the direction of fungl

Name of the fungus	Number of fungi present in patient sample from skin	%
<i>Aspergillus flavus</i>	<b>4</b>	21.1
<i>Aspergillus. Fumigates</i>	<b>3</b>	15.7
<i>Aspergillus niger</i>	<b>3</b>	15.7
<b><i>Candida albicans</i></b>	<b>7</b>	36.8
<b><i>Candida. Tropicalis</i></b>	<b>2</b>	10.5
<b>Total</b>	<b>19</b>	100

High temperature, humidity and sweating facilitate fungal growth. The majority of cases of mycosis superficial cutaneous belong to a group of male and female sex. This is explained by the fact that this group is very active and involved in outdoor activity and over the past decades, has been a growing number of filamentous fungi skin acknowledged agents of skin infections in humans, the fungus is onychomycosis such as *Aspergillus Niger* has been the most commonly isolated clinical isolate (10) percent of (52.5%) of the cases and in *Candida* (9) percent of (47.3%) of the cases, both male and female. Should not be overlooked isolate the mold of the sample coetaneous because they cause almost similar lesion produced by genuine leather. We conclude that in addition to skin and fungus is onychomycosis also highlights the important reasons for superficial mycosis. Therefore, also be considered in this fungus should be to treat antifungal Alastewaiah okan Anti Kithonzul antibiotics more effective direction of fungal isolates ratio (100%).

Dermatophytosis is a major public health problem is intricately linked with socioeconomic standard of the population.

Health education among the population at risk and awareness of preventive measures by following better standards of personal hygiene will help in reducing the prevalence of this disease among the community .The present study gives an insight about the etiological agents of dematophytosis in this part of Andhra Pradesh in India which being rural population and lack of knowledge about the disease differed from other areas in chronicity and involving mixed sites. In case of commonest lesion, species isolated and other variables it is similar to other parts of India.

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