Research Paper

A Study to Assess the Impact of Black Fungus Among High Risk People Residing At Selected Community Area, Puducherry.

MR.R.Prabakaran[1], Mr.V.Subash[2], DR.G.Muthamilselvi[3]

[1] *Assistant Professor in Department of Community Health Nursing, Sri Manakula Vinayagar Nursing College, Puducherry-605107, India.*
[2] *B.Sc., (Nursing) IV Year, Sri Manakula Vinayagar NursingCollege, Puducherry-605107, India* [3]*Principal, Sri Manakula Vinayagar Nursing College, Puducherry – 605 107*
Corresponding author: R.Prabakaran Mail id: prabakaranr@smvnc.ac.in

ABSTRACT
Mucormycosis, also known as black fungus, is a serious fungal infection, usually in people who are immunocompromised. Symptoms depend on where in the body the infection occurs. It most commonly infects the nose, sinuses, eye, and brain resulting in a runny nose, one-sided facial swelling and pain, headache, fever, blurred vision, bulging or displacement of the eye (proptosis), and tissue death. Other forms of disease may infect the lungs, stomach and intestines, and skin. Mucormycosis is a fungal infection caused by fungi in the order Mucorales. In most cases it is due to an invasion of the genera Rhizopus and Mucor, common bread molds. Most fatal infections are caused by Rhizopusoryzae. It is less likely due to Lichtheimia, and rarely due to Apophysomyces. Others include Cunninghamella, Mortierella, and Saksenaea.Majority of the 50 samples, 13(26%) of them have Inadequate knowledge, 36(72%) of them have Moderate level of knowledge, 1(02%) of them have Adequate level of knowledge. The findings reveal that mean (17.68) and standard deviation (8.13) of impact of black fungus among high risk people
Keywords: *impact, black fungus, high risk people*

I. INTRODUCTION:

Mucormycosis, also known as black fungus, is a serious fungal infection, usually in people who are immunocompromised. Symptoms depend on where in the body the infection occurs. It most commonly infects the nose, sinuses, eye, and brain resulting in a runny nose, one-sided facial swelling and pain, headache, fever, blurred vision, bulging or displacement of the eye (proptosis), and tissue death. Other forms of disease may infect the lungs, stomach and intestines, and skin.

The true incidence and prevalence of mucormycosis may be higher than appears. Mucormycosis is rare, affecting fewer than 1.7 people per million population each year in San Francisco. It is around 80 times more prevalent in India, where it is estimated that there are around 0.14 cases per 1000 population, and where its incidence has been rising. Causative fungi are highly dependent on location. Apophysomyces variables has its highest prevalence in Asia and Lichtheimia spp. In Europe. It is the third most common serious fungal infection to infect people, after aspergillosis and candidiasis.

The first case of mucormycosis was possibly one described by Friedrich Küchenmeister in 1855. Fürbringer first described the disease in the lungs in 1876. In 1884, Lichtheim established the development of the disease in rabbits and described two species; Mucorcorymbifera and Mucorrhizopodiformis, later known as Lichtheimia and Rhizopus, respectively. In 1943, its association with poorly controlled diabetes was reported in three cases with severe sinus, brain and eye involvement.

Mucormycosis is a fungal infection caused by fungi in the order Mucorales. In most cases it is due to an invasion of the genera Rhizopus and Mucor, common bread molds. Most fatal infections are caused by Rhizopusoryzae. It is less likely due to Lichtheimia, and rarely due to Apophysomyces. Others include Cunninghamella, Mortierella, and Saksenaea.

II. REVIEW OF LITERATURE:

Asharf Ibrahim et, al. (2020) conducted a study on risk factor for mortality in patients with mucormycosis in Division of General Internal Medicine in USA. 20 patients were selected in the DEFEAT mucormycosis study through randomized sampling technique from a population for the current analysis. A structured questionnaire was used to collect a information about who are at high risk on mortality rate. The result showed that older and younger patients had similar mortality rates. A mortality rate were not significantly different for patients with or without a history of diabetes mellitus corticosteroid use transplantation and gastrointestinal infection.

STATEMENT OF THE PROBLEM:
A study to assess the impact of black fungus among high risk people residing at selected community area, Puducherry.

AIM OF THE STUDY:
The aim of the study was to assess the impact of black fungus among high risk people residing at selected community area, Puducherry.

OBJECTIVE OF THE STUDY:
- Identify the etiology of mucormycosis
- Explain the evaluation of mucormycosis
- Summarize the treatment and management option available for mucormycosis.

ASSUMPTION:
- This study will help community people to gain knowledge regarding Mucormycosis. Structured question may helped community people to gain knowledge.
- There may be no side effect in the treatment of micrococci's.

HYPOTHESIS:
- H1- There will be significant difference in pre and post-test level of knowledge regarding Management of mucormycosis in the experimental group.
- H2- There will significant difference in post level of knowledge regarding management of mucormycosis between experimental and control group.

III. MATERIALS AND METHOD:
The research approach used for this study was quantitative research approach. A descriptive research design was used to assess the impact of black fungus among high risk people residing at selected community area, Puducherry. By using convenience sampling technique 50 sample was selected for the present study. The tool consists of demographic data and multiple choice questionnaire

Section A:
Demographic variables such as age, gender, religion, education, job type, marital status, types of family, having children, types of residence, previous history of covid 19 , having PPE, duration of steroid intake, any lifestyle diseases.

Section B:
- Multiple choice questionnaire to access the impact of black fungus among high risk people residing at silukarapalayam, Puducherry.
- It consist of totally 25 questions. Each questions carry one marks.

SCORE INTERPRETATION:

Classification	Little or more	Mild or moderate	Moderate to severe	Severe
Score	0-7	8-13	14-19	20-25

RESEARCH APPROACH:
A quantitative research approach was selected for this study.

RESEARCH DESIGN:
The descriptive research design was adapted for this study.

SETTING OF THE STUDY:
The study will be conducted at selected community area, Puducherry. The population of the study was high risk people to black fungus at selected community area, Puducherry. Sample size is the number of subjects involved in the study. Sample size consist of 50 people. Sampling refers to the process of selecting a portion of the population to represent the entire population. Sampling technique chosen was convenience sampling.

SAMPLE:
The sample of the study is post covid patients.

SAMPLE SIZE
The sample size of the study consists of 50.

SAMPLING TECHNIQUE:
The convenience sampling technique was used for this study.

CRITERIA FOR SAMPLE SELECTION:
Inclusion criteria:
- Post covid patient.
- Those who are willing to participate in the study.
- Both male and female.

Exclusion criteria:
- People having communicable and non-communicable disease other than covid.
- Those who are not willing to participate in the study

IV. DATA ANALYSIS AND INTERPRETATION

The analysis is a process of organizing and synthesizing the data in such a way that the research questions can be answered and the hypotheses are tested**.** This chapter deals with the analysis and interpretation of the data collected from 50 sample to assess the knowledge on practice regarding impact of black fungsand among high risk people at Silukaripalayam area, Puducherry. The data was organized, tabulated and analyzed according to the objectives. Data analysis begins with description that applies to the study in which the data are numerical with some concepts. Descriptive statistics allows the researcher to organize the data and to examine the quantum of information and inferential statistics is used to determine the relationship.
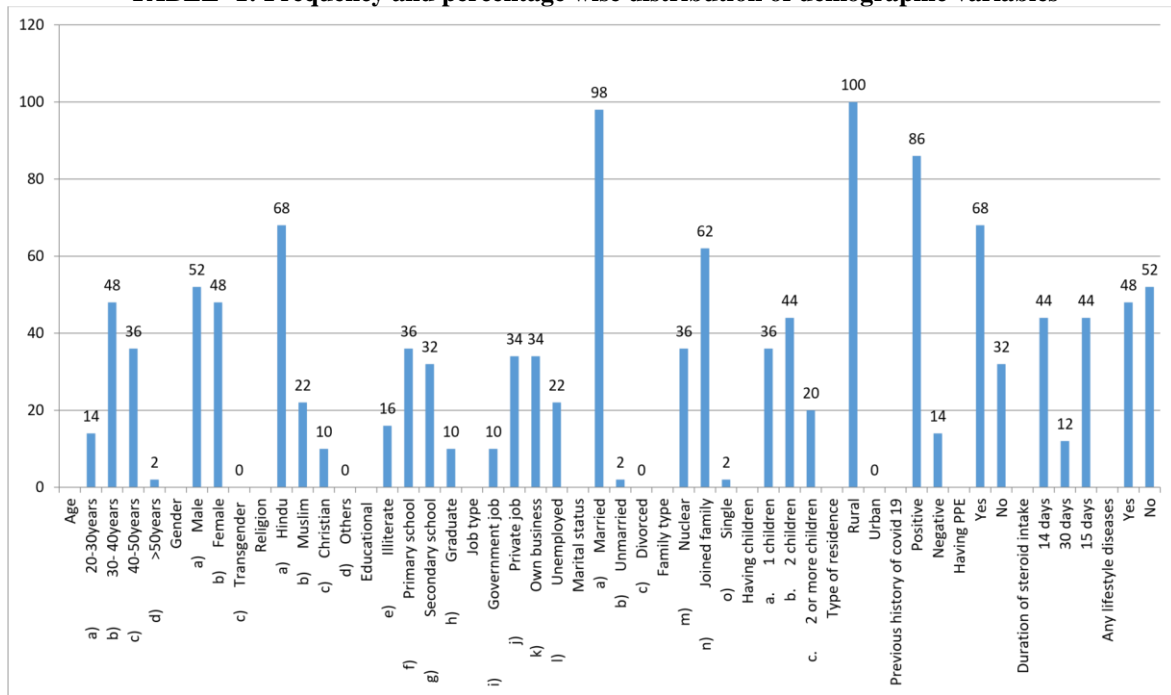
ORGANISATION OF THE DATA

TABLE – I: Frequency and percentage wise distribution of demographic variables.

TABLE – II: Frequency and percentage wise distribution of impact of black fungus among high risk people
TABLE – III: Mean and Standard deviation of the impact of black fungus among high risk people
**TABLE – IV:** Association on assess the impact of black fungus among high risk people

---

TABLE -1: Frequency and percentage wise distribution of demographic variables

TABLE-II: Frequency and percentage wise distribution of impact of black fungus among high risk people [N= 50]

SCORING INTERPRETATION	FREQUENCY	PERCENTAGE
Low	0	0
Moderate	13	26
High	37	74

Out of 50 samples, 13(26%) of them have Inadequate knowledge, 36(72%) of them have Moderate level of knowledge, 1(02%) of them have Adequate level of knowledge
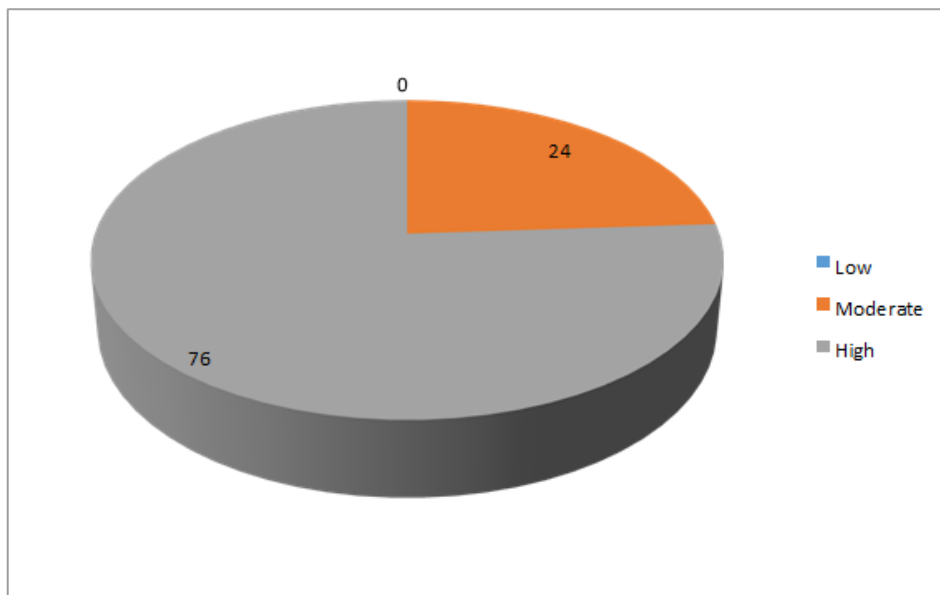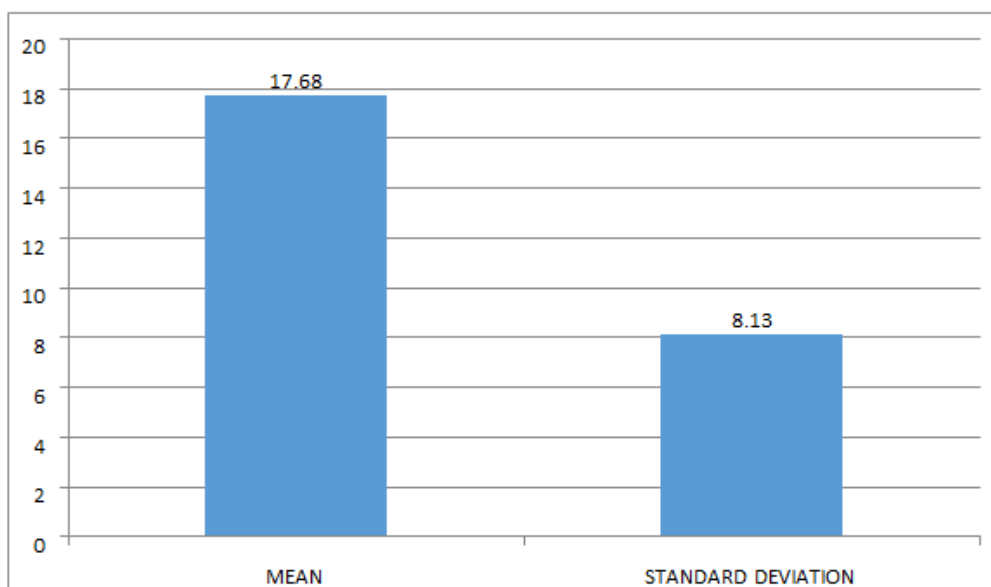
TABLE –III: Area wise Mean and Standard deviation of impact of black fungus among high risk people.
[N = 50]

MEAN	STANDARD DEVIATION
17.68	8.13

The findings reveal that mean (17.68) and standard deviation (8.13) of impact of black fungus among high risk people.

V. RESULTS

➤ The study result shows that out of the People who were interviewed, Majority of the patients24(48%) were in the age group between 30-40 years. Most of the People 26(52%) were males .Most of the people34 (68%) belongs to Hindu religion. Most of them patients are primary school education 18 (36%).Majority of the patients were Private Job 17(34%). Majority of the patients were Married 49 (98%). Majority of the patients were Joined family 31(62%). Majority of the patients having 2 children 22 (44%). Majority of the patients were Rural 50 (100%). Majority of the patients had previous history of covid 19, positive 43 (86%). Majority of the patients had PPE 34 (68%).Majority of the patients were 15 days duration of steroid intake 22 (44%).Majority of the people were had not any lifestyle diseases 26 (52%)

➤ Out of 50 samples, 13(26%) of them have Inadequate knowledge, 36(72%) of them have Moderate level of knowledge, 1(02%) of them have Adequate level of knowledge. The findings reveal that mean (17.68) and standard deviation (8.13) of impact of black fungus among high risk people.

VI. CONCLUSION AND RECOMMENDATIONS:

A study to assess the impact of black fungus among high risk people residing at selected community area puducherry.The findings of the study revealed that majority of the patients 13(26%) of them have Inadequate knowledge, 36(72%) of them have Moderate level of knowledge, 1(02%) of them have Adequate level of knowledge.
The mean and standard deviation of impact of black fungus among high risk people residing is(17.68$\pm$8.13)respectively.

NURSING IMPLICATIONS:
The study had implications for nursing practice, nursing education, nursing administration and nursing research.

NURSING PRACTICE:
The community area nurses must have some knowledge about black fungus and take care of high risk population.

NURSING EDUCATION:

The nurse educated the general people about the black fungus in the community settings and handling of high risk clients. Provide a necessary health education, provide a activity therapy or routine works etc.,

NURSING RESEARCH:

Numbers of studies are being conducted to assess the impact of black fungus among high risk people residing at selected community area at Puducherry. Nursing studies are comparatively less in this community field. Different studies have to be conducted further prevalence of infection.

NURSING ADMINISTRATION:

Nurse's administrators can make necessary steps to spread awareness about black fungus infection. Nurse's administration can organize awareness program or some participation events about black fungal infection.

RECOMMENDATIONS FOR THE STUDY:
- A similar study can be conducted by large number of sample in future.
- The study was conducted to particular group of people at particular age.
- A prospective study can also be conducted.

BIBLIOGRAPHY

BOOK REFERENCE:
[1]. Kameshwaran S, Sriram N, Raju D, Manimekalai P, Dhanalakshmi M (2021) Symptoms and treatment strategy of black fungus in covi-19 patients. Int J Pharm Clin Res 5: 59-62. Link: https://bit.ly/2WFHoww
[2]. Petrikkos G, Skiada A, Lortholary O, Roilides E, Walsh TJ, et al. (2012) Epidemiology and Clinical Manifestations of Mucormycosis. Clinical Infectious Diseases 54: S23-S34. Link: https://bit.ly/3zv2kEK
[3]. Lewis RE, Kontoyiannis DP (2013) Epidemiology and treatment of mucormycosisexternal icon. Future Microbiol 8: 1163-1175. Link: https://bit.ly/3jynnRb
[4]. Hasegawa M (2017) Differential Diagnosis and Pathogenesis for Orbital Tumors. Japanese Journal of Neurosurgery June 26: 419-429. Link: https://bit.ly/3yD9J3A
[5]. Ministry of AYUSH Govt. of India, Guidelines for Ayurveda practitioner's for covid-19 Link: https://bit.ly/3DunVzH
[6]. YM Sri Sarada Ayurveda Hospital Derisanamcope, Azhagiapandiapuram Post KanyakumariDist- 629851, Tamil nadu. & Professor Dept of Kayachikitsa& PG StudiesPankajakasthuri Ayurveda Medical College, Killy, Kattakkada.
[7]. PG Department of Panchakarma, Ayurveda Mahavidyalaya, Hubli, India.2, 3,4PG Scholar, PG Department of Panchakarma,AyurvedaMahavidyalaya, Hubli, India. Corresponding Email id: mmrodd9655@gmail.com Access this article online: www.jahm.co.in Published by Atreya Ayurveda Publications under the license CC-by- NCSA.
[8]. Walsh TJ, Gamaletsou MN, McGinnis MR, Hayden RT, Kontoyiannis DP (2012) Early clinical and laboratory diagnosis of invasive black fungus external icon. Clin Infect Dis 54: S55-S60.
[9]. Afroze SN, Korlepara R, Rao GV, Madala J (2017) black fungus in a diabetic patient: a case report with an insight into its pathophysiology. ContempClin Dent 8(4):662
[10]. Ahmed MH, Hassan A (2020) Dexamethasone for the treatment of coronavirus disease (COVID-19): a review. SN ComprClin Med 2(12):2637–2646

JOURNAL REFERENCE :
[11]. Kameshwaran S, Sriram N, Raju D, Manimekalai P, Dhanalakshmi M (2021) Symptoms and treatment strategy of black fungus in covi-19 patients. Int J Pharm Clin Res 5: 59-62. Link: https://bit.ly/2WFHoww
[12]. Petrikkos G, Skiada A, Lortholary O, Roilides E, Walsh TJ, et al. (2012) Epidemiology and Clinical Manifestations of Mucormycosis. Clinical Infectious Diseases 54: S23-S34. Link: https://bit.ly/3zv2kEK
[13]. Lewis RE, Kontoyiannis DP (2013) Epidemiology and treatment of
[14]. Mucormycosisexternal icon. Future Microbiol 8: 1163-1175. Link: https://bit.ly/3jynnRb
[15]. Hasegawa M (2017) Differential Diagnosis and Pathogenesis for Orbital
[16]. Tumours. Japanese Journal of Neurosurgery June 26: 419-429. Link: https://bit.ly/3yD9J3A
[17]. Ministry of AYUSH Govt. of India, Guidelines for Ayurveda practitioner's for covid-19 Link: https://bit.ly/3DunVzH

NET REFFERENCE:
[18]. Www. Wikipedia. Com
[19]. www.researchgate.net
[20]. Www. ncbi.nlm.nih.gov/pubmed.com
[21]. www. Science direct.com
[22]. www.hindawi.com
[23]. www.Medrxiv.org
[24]. www.webmd.com