A Study to Assess the Nursing Approach towards Measures Taken to Control of Mucormycosis among Staff Nurse Working in Smvmch at Puducherry.

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"Let us never consider ourselves finished nurses…we must be learning all of our lives".
-Florence nightingale

ABSTRACT
The present study was conducted to assess the nursing approach towards measures taken to control of mucormycosis among staff nurse working in smvmch at puducherry. The study was Descriptive research design. A total of 30 staff nurse who met the inclusion criteria were selected from the smvmch at puducherry by using convenience sampling technique. Majority of staff nurse 16(53.3%) had moderate and 14(46.7%) had adequate level of knowledge. The mean and standard deviation of the level of knowledge regarding nursing approach towards measures taken to Control of mucormycosis among staff nurse working in SMVMCH is 16.10±2.833
Keywords: Mucormyosis, Control of Mucormyosis

I. INTRODUCTION

Mucormycosis (MCM) is a devastating infection with high Mortality rates despite recent advances in its diagnosis and Treatment. It is caused by the filamentous fungi of the Mucorales order of the class of Zygomycetes. Although It is classically defined as an opportunistic infection, preferentially Affecting patients with diabetes mellitus (DM), Neutropenia, malignancy, chronic renal failure, and acquired Immunodeficiency syndrome and those who have received Organ or hematopoietic stem cell transplants, it can affect Immuno-competent hosts as well (such as trauma patients). The incidence of MCM worldwide appears to be Increasing, particularly in oncological patients and those with DM. Along with aspergillus; it is one of the most common Invasive fungal infections affecting immunosuppressed individuals.

Mucormycosis is a rare opportunistic fulminant fungal infection caused by saprophytic fungi. According to Brown, mucormycosis ranked third among opportunistic deep fungal infections, after Candidiasis and Aspergillosis. It is frequently found in soil, residue plants, spoiled food and upper respiratory tract of healthy individuals. It becomes pathogenic when associated with predisposing factors such as immune compromised states, most commonly (60–81%) diabetes mellitus.

The term "mucormycoses" is used to describe a spectrum of chronic, subacute, and frequently rapidly progressing infections caused by fungi of the Mucorales order of the class of Zygomycetes. Clinical presentations of mucormycosis are variable and include sinusitis (pansinusitis, rhino-orbital or rhino-cerebral), pulmonary, cutaneous, gastrointestinal, disseminated, and other uncommon presentations. The most common agents causing mucormycosis are Rhizopus spp., Mucor spp., Rhizomucor, and Leichtheimia spp. Other genera less commonly implicated in infection include Cunninghamella, Saksenaea, and Apophysomyces. These organisms are ubiquitous in nature as they can be found in decaying organic substrates and soil. Mucorales are growing rapidly and they are releasing large numbers of airborne spores.

Mucormycosis is one of the most rapidly progressing and lethal form of fungal infection in humans which usually begins in the nose and paranasal sinuses (1). This fungus invades the arteries, forms thrombi within the blood vessels that reduce blood supply and cause necrosis of hard and soft tissues (1, 2). Once entered into the arteries, the fungus can spread to orbital and intracranial structures (3, 4). Usually mucormycosis presents as an acute infection and manifests as rhinocerebral, pulmonary, gastrointestinal, cutaneousor disseminated form (1). In the case presented here the infection followed a

chronic course, and somewhat indolent form which eventually caused maxillary necrosis.

As the novel coronavirus disease (COVID-19) continues to rampage, an abrupt increase in the number of opportunistic fungal infections has been observed. Globally, severalcases of mucormycosis have been described in patients with COVID-19,1-8 an entity being described as COVID-19-associated mucormycosis (CAM). Although a causal link between COVID-19 and mucormycosis remains unearthed, multiple factors including glucocorticoids, worsening of blood glucose control and viral-induced lymphopenia have been implicated in the development of mucormycosis in patients with COVID-19.

Epidemiology, diagnosis, and treatment, originate from case reports and case series. High morbidity and mortality. Mucormycetes belong to the Mucormycosis is a rare, emergingfungal infection, with order Morales, subphylum Mucoromycotina.1 Due to the randomizedclinical trials, and most of the available data regarding rarity of the disease, it is almost impossible to conduct large.

AIM OF THE STUDY:
The aim of the study was to control of mucormycosis among staff nurse working in control of mucormycosis among staff nurse working in smvmch at puducherry

OBJECTIVES OF THE STUDY
- To assess the level of knowledge regarding nursing approach towards measures taken to Control of mucormycosis among staff nurse
- To associate the level of knowledge regarding nursing approach towards measures taken to Control of mucormycosis among staff nurse working in SMVMCH with selected demographic variables.

METHODOLOGY
The research approach used for this study was quantitative research approach. A descriptive research design was used to control of mucormycosis among staff nurse working in smvmch at puducherry By using convenient sampling technique 30 samples was selected for the present study. The period of data collection was two weeks. The tool consists of demographic data, and standard questionnaire. The outcome of the study was evaluated by using descriptive and inferential statistics.

RESEARCH DESIGN :
A descriptive Research design was adapted for this study.

RESEARCH SETTING:
The study will be conducted at smvmch at puducherry.Sample size consist of 30 Staff Nurse A convenient sampling technique is used for this study.

DESCRIPTION OF THE DATA COLLECTION OF TOOLS :
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 questionnaires to access the nursing approach towards measures taken to control of mucormycosis among staff nurse in SMVMCH, Puducherry.
It consists of totally 25 questions. Each question carries one mark.

PROCEDURES FOR THE DATA COLLECTION:
After the validation of the tool and content from the consent authority, the date and time will be fixed for collecting data. The sample of 30 post-covid patient, who was selected by convenience sampling technique, after introducing and maintained relationship with the staff nurses who are interested to be.

II. RESULTS
The major findings of the study were;
- Majority of staff nurse 16(53.3%) had moderate and 14(46.7%) had adequate level of knowledge. The mean and standard deviation of the level of knowledge regarding nursing approach towards measures taken to Control of mucormycosis among staff nurse working in SMVMCH is 16.10±2.833.
- The other demographic variable had not shown statistically significant association between the level of knowledge regarding nursing approach towards measures taken to Control of mucormycosis among staff nurse working in SMVMCH with selected demographic variables respectively.

Section A: Description of the demographic variables among staff nurse.
   Table 1:- Frequency and percentage wise distribution of demographic variables among staff nurse.
(N=30)

SL. NO	DEMOGRAPHIC VARIABLES	FREQUENCY (N)	PERCENTAGE (%)
1	**Age**		
	A) 20-30 years	25	83.3
	B) 30-40 years	5	16.7
	C) 40-50 years	0	0
	D) >50 years	0	0
2	**Gender**		
	A) Male	0	0
	B) Female	30	100
	C) Transgender	0	0
3	**Religion**		
	A) Hindu	26	86.7
	B) Muslim	1	3.3
	C) Christian	3	10
	D) Others	0	0
4	**Education**		
	A) ANM	1	3.3
	B) B.Sc., (N)	28	93.3
	C) P.B.B.Sc (N)	1	3.4
	D) M.Sc., (N)	0	0
5	**Job type**		

	A) Staff nurse	28	93.3
	B) ANM	1	3.3
	C) Head nurse	1	3.4
	D) Nurse educator	0	0
6	**Marital status**		
	A) Unmarried	18	60
	B) Married	12	40
	C) Divorced	0	0
7	**Type of family**		
	A) Nuclear	13	43.3
	B) Joined family	15	50
	C) Single	2	6.7
8	**Type of Residence**		
	A) Rural	19	63.3
	B) Urban	11	36.7
9	**Previous history of covid 19**		
	A) Positive	7	23.3
	B) Negative	23	76.7
10	**Having PPE**		
	A) Yes	29	96.7
	B) No	1	3.3

Table 1 shows frequency and Percentage wise distribution of demographic variables among staff nurse. Out of the 30 staff nurse who were interviewed, Majority of the staff nurse 25(83.3%) of study population were in the age group are 20-30 years. All of the staff nurse was Female 30(100%).

Majority of the staff nurse were Hindu 26(86.7%). Majority of the staff nurse were B.Sc., (N) 28(93.3%). Majority of the nurse were staff nurse 28(93.3%). Majority of the staff nurse were unmarried 18(60%). Majority of the staff nurse were joined family 15(50%). Majority of the staff nurse were Rural 19(63.3%). Majority of the staff nurse had previous history of covid 19, 23(76.7%) Negative. Majority of the staff nurse had PPE, 29(96.7%).
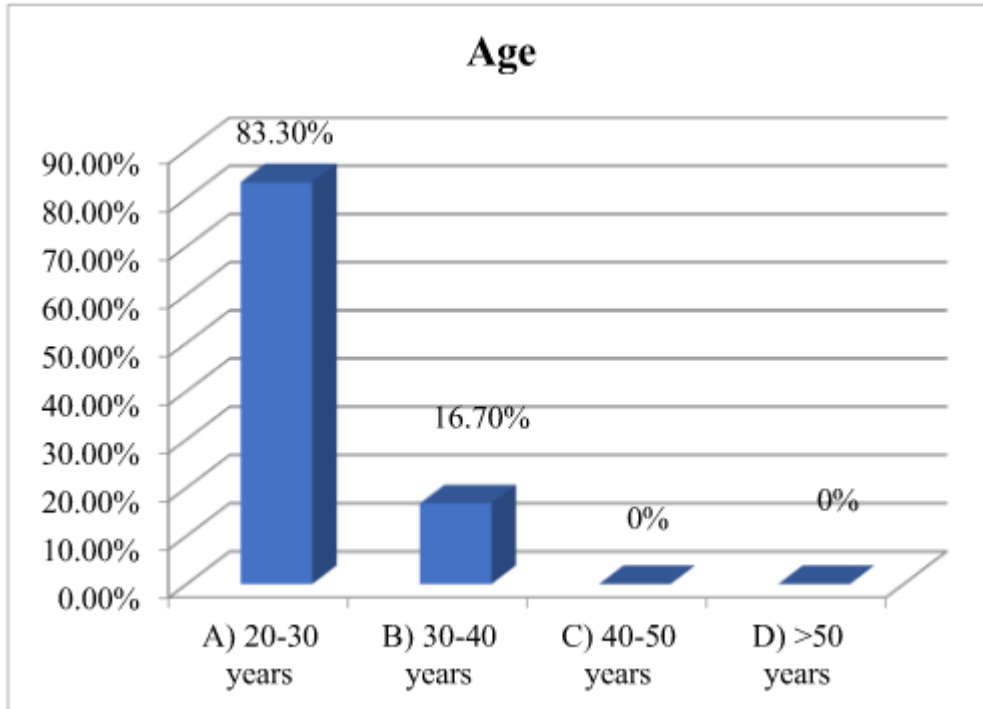

Fig-1: Bar diagram representing percentage wise distribution of age of staff nurse.
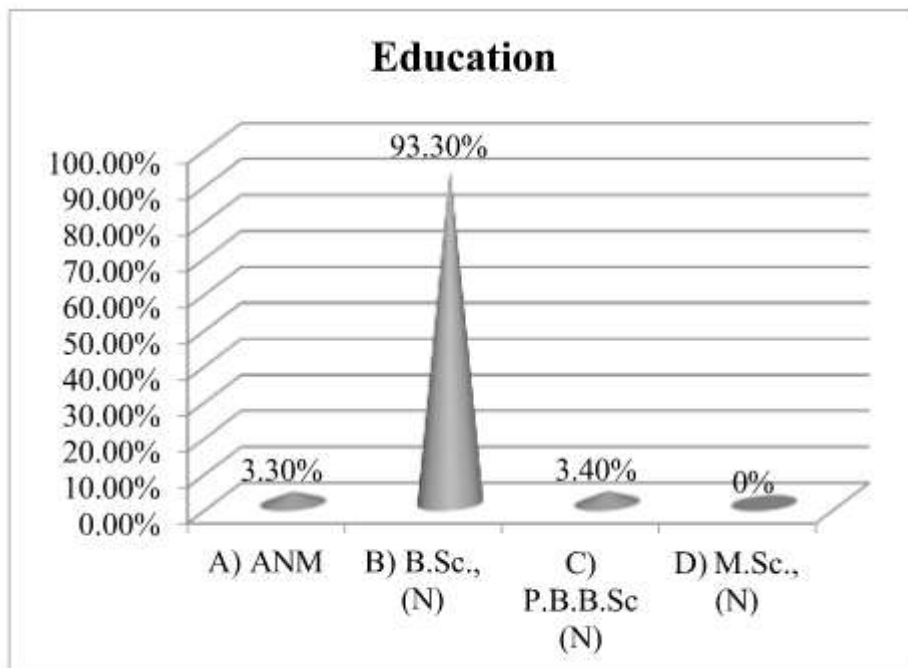
Fig-2: Bar diagram representing percentage wise distribution of educational status among staff nurse.
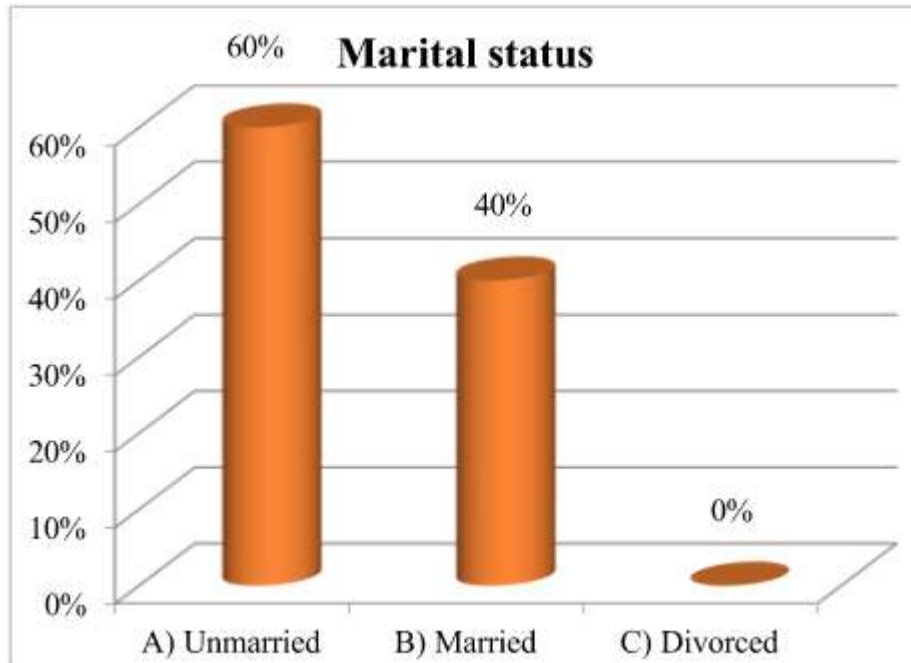
Fig-3: Bar diagram representing the percentage wise distribution of marital status of staff nurse
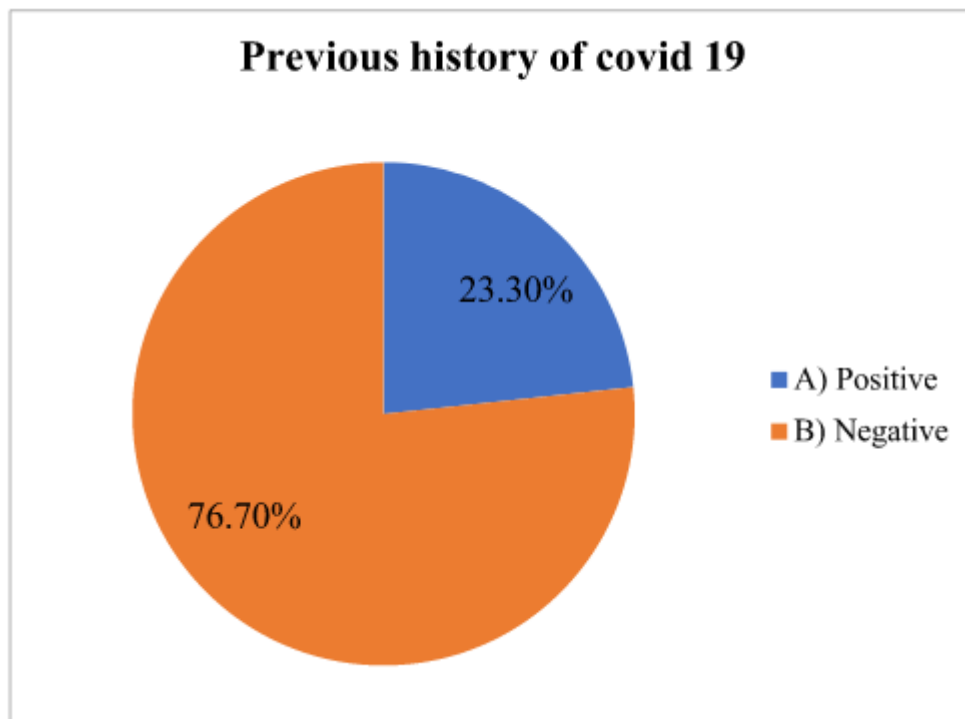

Fig-4: Pie chart representing percentage wise distribution of previous history of covid-19 among staff nurse.
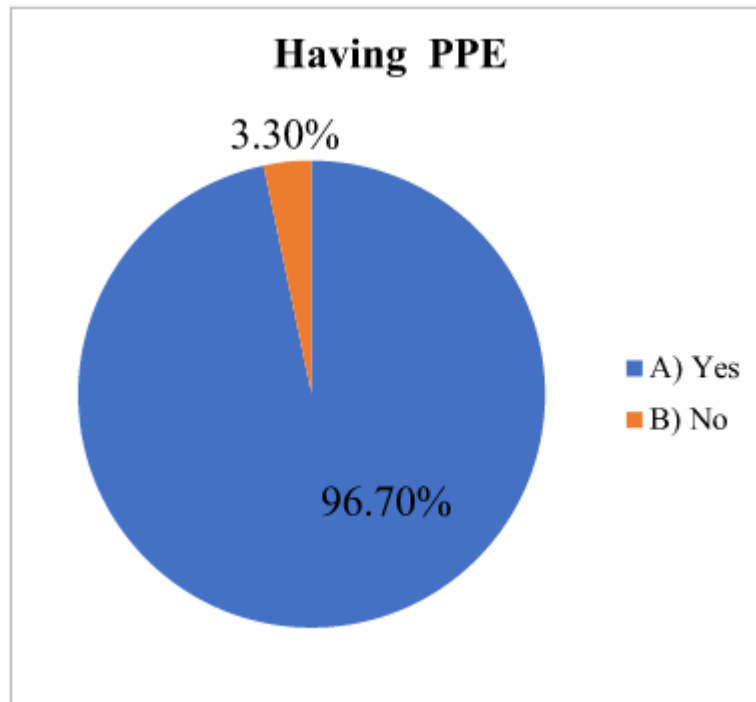
Fig-5: Pie chart representing percentage wise distribution of staff nurse having PPE

Section B: Assessment of the level of knowledge regarding nursing approach towards measures taken to Control of mucormycosis among staff nurse working in SMVMCH.

Table 2:- Frequency and percentage wise distribution of the level of knowledge regarding nursing approach towards measures taken to Control of mucormycosis among staff nurse working in SMVMCH. (N=30)

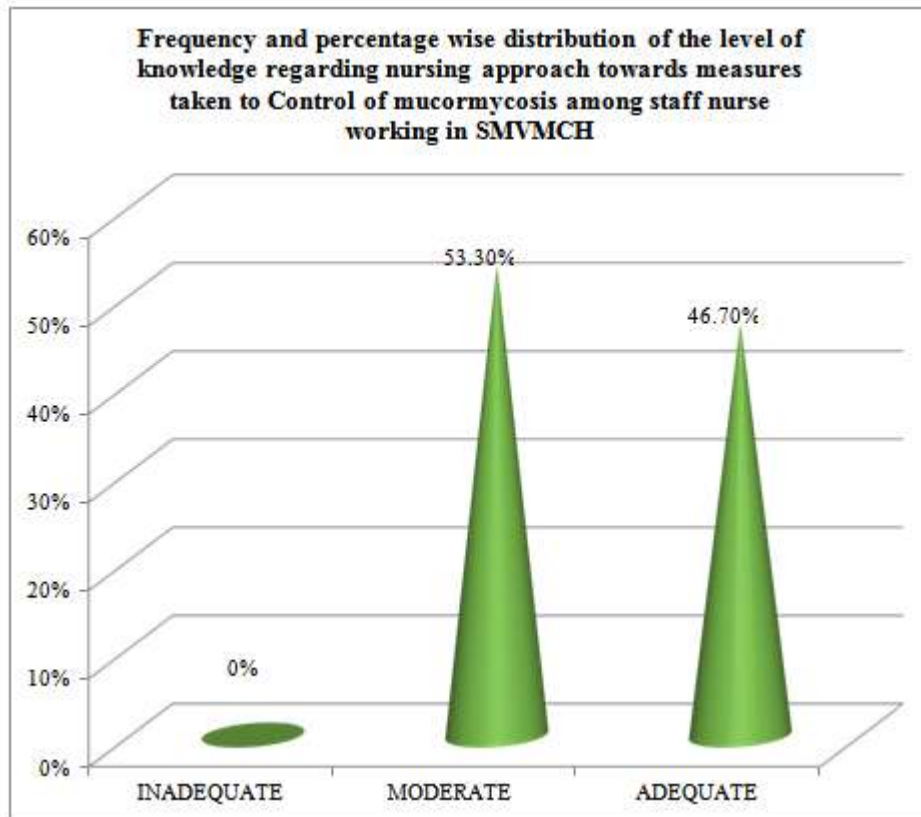| LEVEL OF KNOWLEDGE	FREQUENCY (n)	PERCENTAGE (%)
INADEQUATE	0	0
MODERATE	16	53.3
ADEQUATE	14	46.7
Mean **Standard deviation**	16.10±2.833	

Table –2: shows that frequency and percentage wise distribution of the level of knowledge regarding nursing approach towards measures taken to Control of mucormycosis among staff nurse working in SMVMCH.

Majority of staff nurse 16(53.3%) had moderate and 14(46.7%) had adequate level of knowledge. The mean and standard deviation of the level of knowledge regarding nursing approach towards measures taken to Control of mucormycosis among staff nurse working in SMVMCH is 16.10±2.833.

BIBLIOGRAPHY

BOOK REERENCE:
[1]. K.Park, **"Textbook of Preventive and social medicine"**, Published by bhanot publishers 25th edition, Page: 599 to 61Page
[2]. S.Kamalam, **"Essential in Community health nursing practice"**, Published by jaypee brothers medical publications, 3rd edition, Page: 315 to 325.
[3]. Bijayalakshmi dash, **"A comprehensive textbook of community health nursing practice"**, Published by jaypee brothers, 4th edition, Page: 298 to 310.
[4]. Polit. D.F. Hungler Bp, **"Essentials of Nursing Research"**, (1999), JB Lippincott Company, Philadelphia, 16th edition, Page: 40 to 43.
[5]. Potter and Perry, **"Clinical Nursing Skills and Techniques"**, (1990), The C.V. Mosby Company, 2nd edition, Page: 89 to 92.publications
[6]. Sharma R.N, **"Methodology of Education Research"**, (1993), Surjeet Publication, 1st edition, Page: 253 to 258.
[7]. Sundar Rao P.S, Richard.J, **"An Introduction to Biostatistics"**, (1999), Elsevier Publication, 3rd edition, Page: 78 to 79.
[8]. Georly George, **"Textbook of Community Health Nursing"**, Jaypee publications, 5th edition, Page: 189 to 197.
[9]. R.P. Saxena, **"Textbook of Community Health Nursing"**, Lotus publishers, 3rd edition, Page: 180 to 188.
[10]. Dr.T.Vasundhara tulasi, **"Textbook of Community health Nursing practice"**, Published by Frontline Publications, 2nd edition, Page: 415 to 434

JOURNAL REFERENCE:

[1]. Patrick Schwarz,Houssem Guedouar,Farah Laouiti,Frédéric Grenouillet andEric Dannaoui. J. Fungi 2019, 5(3), 56Cited by 11 | Viewed by 2749 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

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[8]. Walsh TJ, Gamaletsou MN, McGinnis MR, Hayden RT, Kontoyiannis DP (2012) Early clinical and laboratory diagnosis of invasive Mucormycosis external icon. Clin Infect Dis 54: S55-S60.

[9]. Afroze SN, Korlepara R, Rao GV, Madala J (2017) Mucormycosis in a diabetic patient: a case report with an insight into its pathophysiology. Contemp Clin Dent 8(4):662

[10]. Ahmed MH, Hassan A (2020) Dexamethasone for the treatment of coronavirus disease (COVID-19): a review. SN Compr Clin Med 2(12):2637–2646

NET REFERENCES:

- Www.Wikipedia. Com
- www.researchgate.net
- www.ncbi.nlm.nih.gov/pubmed.com
- www.Science direct.com
- www.hindawi.com
www.Medrxiv.org
- www.webmd.com
- www.iosrjournals.org
- www.google.com
- www.cochranelibrary.com