

Knowledge of Mucormycosis among Undergraduate Nursing Students of AIIMS New Delhi

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Abstract

“Mucor” is a fungus which is normally present in the environment and in soil. It causes disease only when immunity is critically low. Early detection and management of the Mucormycosis is very crucial. Delay reporting symptoms of the infection should be avoided and treatment should be initiated at the earliest

AIM: The aim of this study is to *assess the Knowledge of Mucormycosis among Undergraduate Nursing Students of AIIMS New Delhi*”.

Method A descriptive cross sectional survey was adopted using online platform as direct contact with the participants is not possible during this period. An online questionnaire was used to assess knowledge of Mucormycosis among the undergraduate Nursing students of AIIMS, New Delhi. Population selected are B.Sc Nursing 2nd, 3rd and 4th year and post basic 1st and 2nd year students who are studying in College of Nursing, AIIMS, New Delhi using smart Phone and Whats app.

Result: All the nursing students (N=230) had good and homogenous knowledge about mucormycosis with mean knowledge score 7.99 (minimum 3 and maximum10) and SD±1.1. Most of the students (88.7%) would like to include the topic in the syllabus as they would like to know in detail about the disease. 90% of the Students showed a greater appreciation and willingness to attend seminar/webinar on this topic of Mucormycosis.

Conclusion: In the current study, although most of the study participants possess a good knowledge toward the prevention of COVID-19, it is surprising to know that the students are seeking formation from unverified sources such as social media and internet. These results are impactful and should be addressed through standardized training opportunities and distribution of official sources about mucormycosis .There is also a need to Constantly updated refresher training from authentic sources which will contribute to better performance of the student Nurses in clinical areas

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Keyword: Knowledge, Mucormycosis, undergraduate nursing students.

Introduction

The surge of Covid 19 in its second wave has left a trail of disease and death in the form of black

fungus or Mucormycosis. Mucormycosis is a life-threatening fungal infection characterized by host tissue infarction and necrosis that occurs mostly in immunocompromised patients and is associated with an increasing incidence and mortality despite the availability of therapeutic tools.¹

Black fungus has now become epidemic and therefore it is very important to take all necessary measures to prevent it from spreading.

Nursing students have an inevitable role in caring and most importantly giving education to patients with any infectious disease. Therefore the Nursing students need to understand the magnitude of the disease and give adequate teaching regarding the control and prevention of Mucormycosis to the patient during their training period. It is important to increase awareness of mucormycosis among nursing students who will be an important future health care providers. It is important for nursing students to stay up-to-date on current guidelines for the diagnosis and treatment of mucormycosis and remain cognizant of emerging literature on the topic.²

Since the diagnosis of mucormycosis is challenging and treatment should start as early as possible in order to decrease mortality³, we should help the nursing students in understanding the risk factors and clinical presentation of mucormycosis to provide prompt treatment to the patient.

It is important to increase awareness of mucormycosis and to stay up-to-date on current guidelines for the diagnosis and treatment of mucormycosis and remain cognizant of emerging literature on the topic.⁴

Objectives of the Study:

1. To assess the knowledge of Mucormycosis secondary to Covid 19 among undergraduate nursing students of AIIMS, New Delhi.
2. To assess the need to include the guidelines for the care of the patient with Mucormycosis in the undergraduate syllabus.

Material and Methods

The study was conducted among the undergraduate nursing students, College of Nursing, All India Institute of Medical Sciences, New Delhi. The questionnaire was administered to all 230 of the undergraduate nursing students studying at the College of Nursing, AIIMS. Of them there were 62, 59, 38 and 26 students studying in the First, Second, Third and Fourth year respectively of the B.Sc. (Honors) Nursing programme and 26 and 19 students were studying in Post Basic Nursing Programme.

Descriptive cross sectional survey was conducted using online platform as direct contact with the participants was not possible during this period. An online questionnaire was used to assess knowledge of Mucormycosis among the undergraduate Nursing students of AIIMS, New Delhi. The tool consists of 10 items based on the knowledge, prevention and treatment of Mucormycosis.

Data collecting instruments consist of three sections:

Section I pertains to information about survey, and consent.

Section II pertains to demographic characteristics. (Tool 1)

Section III pertains to questionnaire of

Mucormycosis (Tool2)

In order to ensure the validity of tool, it was given to five experts from nursing. Tool was found to be valid with few corrections, which were incorporated and the final draft of the tool was prepared. Try out was conducted to ensure the clarity of the tools. The reliability of the tool was determined by Cronbach's alpha which is .76 and the tool found to be reliable. Data was analyzed using both descriptive and inferential statistics.

Ethical permission was taken from institutional ethical committee of All India Institute of Medical Science, New Delhi. The objectives of the study explained and informed consent obtained from participants.

Results

OVERALL KNOWLEDGE SCORE OF THE STUDENTS

Table 1. Shows mean Knowledge score and standard deviation of the different groups of the students.

Course	Mean	N	Std. Deviation
BSc(H) Nursing-I	7.97	62	1.187
BSc(H) Nursing-II	7.81	59	1.383
BSc(H) Nursing-III	8.11	38	0.764
BSc(H) Nursing-IV	8.04	26	1.216
BSc(PB) Nursing-I	8.27	26	1.041
BSc(PB) Nursing-II	7.95	19	1.177
Total	7.99	230	1.167

All the nursing students (N=230) had good and homogenous knowledge about mucormycosis with mean knowledge score 7.99 (minimum 3 and maximum10) and SD±1.1.

Table 2. Shows source of information related to mucormycosis.

Source	Frequency	Percentage
Social media	56	24.3
Internet	78	33.9
Newspaper	19	8.3
hospital	24	10.4
Books	16	7.0
television and radio	37	16.1
Total	230	100.0

The most common source of the students' information about Mucormycosis was the internet (33.9%), followed by social media (24.3%) including electronic news websites and social media such as Twitter, Facebook, YouTube, Instagram, Snapchat and WhatsApp, television and radio (16.1%), hospital (10.4%), newspaper (8.3%) and the least source of information is obtained from the books (7%) .

Table 3 depicts the information related to willingness of the students to include (incorporate) Mucormycosis in the syllabus.

	Response	Frequency	Percent
Would you like the topic to be included in the syllabus?	No	26	11.3
	Yes	204	88.7

The implication of Table 3 is that most of the students (88.7%) would like to include the topic in the syllabus as they would like to know in detail about the disease.

Table no 4. Presents information related to willingness of the students to attend seminar/webinar on this topic. **N=230**

	Response	Frequency	Percent
Would you like to attend seminar /webinar on Mucormycosis?	No	23	10%
	Yes	207	90%

Table 4 shows that the 90% of the Students showed a greater appreciation and willingness to attend seminar/webinar on this topic of Mucormycosis.

Table 5. Correlation between the class and the score. N=230

Year of B.Sc. Nursing	Pearson Correlation	1	0.062
	Sig. (2-tailed)		0.353
k_score	Pearson Correlation	0.062	1
	Sig. (2-tailed)	0.353	

Correlation between B.Sc. (Hons) Nursing Students and knowledge score was not Significant (p 0.353 and r= 0.062).

Table 6: Knowledge mean score between the group and within the group

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.495	5	0.899	0.655	0.658
Within Groups	307.488	224	1.373		
Total	311.983	229			

ANOVA test was applied to test the Knowledge mean score between the group and within the group, which shows that it is not significant (p value 0.658).

Conclusion

Findings of this study conclude that all the students (N=230) had good and homogenous knowledge about mucormycosis with mean knowledge score 7.99 (minimum 3 and maximum 10) and $SD \pm 1.1$. The present results are similar to those reported by Amin N. Olaimat whose overall student COVID-19 knowledge score was 80.1%, indicating that most students were knowledgeable about this pandemic.⁵ The knowledge reported by Zhong et al. also found that the overall knowledge score was 90% among Chinese residents during the rapid rise period of COVID-19 cases in Hubei Province.⁶

In the current study, the most common source of the student's information about Mucormycosis was the internet (33.9%). Alzoubi et al. stated that social media was the most common source of information for Mutah university students.⁷

Based on the results of the current study, majority of the students would like to include the topic in the syllabus as they would like to know in detail about the disease. Majority of the students also expressed their willingness to attend seminar/webinar on this topic.

Amin N. Olaimat suggested health education programs about viral infections and other infectious diseases should be continuously implemented to university students through a required credit course during their studies.

TS Suryanarayanan also suggested to first educate society about the disease so as to enhance their knowledge regarding these diseases so that they might directly engage in the implementation of protective health measures to contain infectious diseases such as the COVID-19 pandemic.⁸

In the current study, although most of the study participants possess a good knowledge toward the prevention of COVID-19, it is surprising to know that the students are seeking formation from unverified sources such as social media and internet. These results are impactful and should be addressed through standardized training opportunities and distribution of official sources about mucormycosis. There is also a need to constantly updated refresher training from authentic sources which will contribute to better performance of the student Nurses in clinical areas.

Conflict of Interest; None

Source of Funding; None

Ethical Clearance: AIIMS ethics committee.
Ref.No.: IEC-434/02.07.2021, RP-20/2021

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