

REVIEW ARTICLE

Year : 2021 | Volume : 14 | Issue : 9 | Page : 401-409

COVID-19-associated mucormycosis and treatments

Vetrivelan Subramaniam¹, Shivkanya Fuloria², Hari Kumar Darnal³, Dhanalekshmi Unnikrishnan Meenakshi⁴, Mahendran Sekar⁵, Rusli Bin Nordin¹, Srikumar Chakravarthi¹, Kathiresan V Sathasivam⁶, Shah Alam Khan⁴, Yuan Seng Wu⁷, Usha Kumar⁸, Kaivatala Sudhakar⁹, Rishabha Malviya¹⁰, Vipin Kumar Sharma¹¹, Neeraj Kumar Fuloria²

¹ Faculty of Medicine, Bioscience and Nursing, MAHSA University, Jalan SP 2, Bandar Saujana Putra, 42610 Jenjarom Selangor, Malaysia

² Faculty of Pharmacy & Centre of Excellence for Biomaterials Engineering, AIMST University, Bedong 08100, Kedah, Malaysia

³ Jeffrey Cheah School of Medicine & Health Sciences, Monash University, Selangor 47500 Malaysia

⁴ College of Pharmacy, National University of Science and Technology, 130 Muscat, Sultanate of Oman

⁵ Department of Pharmaceutical Chemistry, Faculty of Pharmacy and Health Sciences, Universiti Kuala Lumpur Royal College of Medicine Perak, Ipoh 30450, Malaysia

⁶ Faculty of Applied Science & Centre of Excellence for Biomaterials Engineering, AIMST University, Kedah, Bedong 08100, Malaysia

⁷ Centre for Virus and Vaccine Research & Department of Biological Sciences, School of Medical and Life Sciences, Sunway University, Selangor 47500, Malaysia

⁸ Faculty of Medicine, AIMST University, Kedah 08100, Malaysia

⁹ School of Pharmaceutical Sciences (LT-Pharmacy), Lovely Professional University, Jalandhar 144411, India

¹⁰ Department of Pharmacy, SMAS, Galgotias University, Greater Noida 203201, India

¹¹ Department of Pharmaceutical Sciences, Gurukul Kangri, Haridwar, Uttarakhand 249404, India

Next article

Previous article

Table of Contents

Similar in PUBMED

Search Pubmed for

- Subramaniam V
- Fuloria S
- Darnal HK
- Meenakshi DU

This website uses cookies. By continuing to use this website you are giving consent to cookies being used. For information on cookies and how you can disable them visit our

[Privacy and Cookie Policy](#)

AGREE & PROCEED

Faculty of Pharmacy & Centre of Excellence for Biomaterials Engineering, AIMST University, Bedong 08100, Kedah, Malaysia

Login to access the email ID

Source of Support: None, Conflict of Interest: None



DOI: 10.4103/1995-7645.326253

Get Permissions for commercial use

In the current pandemic, COVID-19 patients with predisposing factors are at an increased risk of mucormycosis, an uncommon angioinvasive infection that is caused by fungi with *Mucor* genus which is mainly found in plants and soil. Mucormycosis development in COVID-19 patient is related to various factors, such as diabetes, immunocompromise and neutropenia. Excessive use of glucocorticoids for the treatment of critically ill COVID-19 patients also leads to opportunistic infections, such as pulmonary aspergillosis. COVID-19 patients with mucormycosis have a very high mortality rate. This review describes the pathogenesis and various treatment approaches for mucormycosis in COVID-19 patients, including medicinal plants, conventional therapies, adjunct and combination therapies.

[FULL TEXT] [PDF]

Print this article

Email this Article to your friend

- Sathasivam KV
- Khan SA
- Wu YS
- Kumari U
- Sudhakar K
- Malviya R
- Shama VK
- Fuloria NK

Search in Google Scholar for

- Subramaniam V
- Fuloria S
- Darnal HK
- Meenakshi DU
- Sekar M
- Nordin RB
- Chakravarthi S
- Sathasivam KV
- Khan SA
- Wu YS
- Kumari U
- Sudhakar K
- Malviya R
- Shama VK
- Fuloria NK

Related articles

- Mucormycosis, COVID-19, Immunosuppression, Pathogenesis, Treatment

Citation Manager

Access Statistics

Reader Comments

Email Alert

Add to My List

* Requires registration (Free)

Article Access Statistics

Viewed	2372
Printed	56
Emailed	0
PDF Downloaded	355
Comments	[Add]
Cited by others	2