

Mucormycosis: the deadly black fungus

STAR HEALTH DESK

Mucormycosis, also known as black fungus, is a rare but dangerous infection. It is being increasingly seen in vulnerable patients in India, including those with COVID-19, as the country continues to struggle in the pandemic. Usually very rare, mucormycosis has a high mortality rate and is difficult to treat. The US Centre for Diseases Control and Prevention (CDC) estimates mucormycosis with an overall all-cause mortality rate of 54%.

Mucormycosis is affecting COVID-19 patients more due to prolonged administration of steroids and subsequent immunocompromised state. People with diabetes, on steroids and humidified oxygen for a long time, and COVID-19 patients with pre-existing comorbidities are the most at risk.

It is caused by a group of molds called mucormycetes and often affects the sinuses, lungs, skin, and brain. You can inhale the mold spores or come into contact with them in things like soil, rotting produce or bread, or compost piles.

The infection can happen to anyone at any age. Most



people will come into contact with the fungus at some point in their everyday lives. But you are more likely to get sick if you have a weakened immune system because of a medication you are taking or because you have a health condition like uncontrolled diabetes, cancer, bad health due to poor nutrition etc.

The symptoms of mucormycosis will depend on where in your body the fungus is growing. They may include but not limited to fever, cough, chest pain, shortness of breath, swelling on one side of your face, headache, nausea and vomiting, sinus pain, diarrhoea etc. If your skin is infected, the area can look blistered, red, or swollen. It might turn black or feel warm or painful.

People who have mucormycosis often do not know they have it. You should see your doctor for any type of suspected infection. Fluid and tissue samples may be taken to confirm a diagnosis. Your doctor may do imaging tests like CT or MRI scans to find out whether the infection has spread to your brain or other organs. Mucormycosis is particularly

dangerous because it spreads quickly throughout the body. Left untreated, the infection can spread to the lungs or the brain. This can cause brain infection, paralysis, pneumonia, seizures and even death.

If you are diagnosed with mucormycosis, you should start treatment as soon as possible with antifungal medications prescribed by your doctor. These medicines stop the growth of the fungus, destroy it, and bring the infection under control. Treatment may also include surgical debridement, which involves cutting away all infected tissue. Removing infected tissue has been shown to prevent the infection from spreading further.

Mucormycosis is not contagious, so you cannot get it from an infected person. If you have a weakened immune system, it is important to keep yourself safe outdoors. Wearing a mask while outside and bandaging all wounds until they heal will help prevent fungal infections. People should also maintain personal hygiene, ensure if they have diabetes that it is well controlled, and doctors should discontinue immune-suppressing drugs such as steroids as soon as patients are able.

WOMEN CARE



Urgent action needed to reduce global burden of CVD in women by 2030

In the first-ever global report on cardiovascular disease (CVD) in women, researchers call for urgent action to improve care and prevention, fill knowledge gaps, and increase awareness to tackle the worldwide leading cause of death among women. The all female-led Commission report was published in *The Lancet*.

The *Lancet* women and cardiovascular disease Commission: reducing the global burden by 2030 is authored by 17 leading experts from 11 countries. The Commission aims to help reduce the global burden of cardiovascular conditions – including heart disease and stroke – that account for 35% of deaths in women worldwide by 2030. The Commission's calls to urgently address and reduce CVD in women align with the United Nations (UN) Sustainable Development Goals (SDGs) which aim to reduce premature deaths from non-communicable diseases, including CVD, by one-third by 2030.

The authors have outlined 10 ambitious recommendations to tackle inequities in diagnosis, treatment, and prevention to reduce CVD in women, including educating health care providers and patients on early detection to prevent heart disease in women; scaling up heart health programmes in highly populated and underdeveloped regions; and prioritising sex-specific research on heart disease in women and intervention strategies.

HEALTH bulletin

NCDs: a greater threat than COVID-19 to women



Non-hospitalised COVID-19 patients have low-risk of serious long-term effects

A new study published in *The Lancet Infectious Diseases* journal has found that the risk of delayed acute complications after non-hospitalised SARS-CoV-2 infection is low, but persistent symptoms in this group could lead to increased visits to general practitioners or outpatient clinics in the six months following infection. The study assessed only those complications that led to contact with hospitals.

Results found SARS-CoV-2 positive individuals were at a slightly increased risk of initiating medications to help improve breathing and alleviate migraines, and had a slightly increased risk of receiving a first diagnosis for breathing problems and blood clots in the veins.

The research also analysed the use of health services in the follow-up period and found that those with a positive SARS-CoV-2 test visited their general practitioners around 20% (1.2 times) more often than those that tested negative, and visited outpatient clinics 10% (1.1 times) more often. However, there was no difference in the visits to emergency department or being hospitalised.

The researchers call for large population-based studies of patient-reported symptoms and healthcare visits to fully evaluate the duration and range of any persisting symptoms after SARS-CoV-2 infection.

UMMAY FARIHIN SULTANA

The matters of grave concern in health are not the epidemic, flues or parasites that reign over the news and take most of the government's effort, rather they are the everyday diseases that people can address yet fail to take action.

Non-Communicable Diseases (NCDs) have emerged as the leading cause of death and disabilities, contributing 67% to the total death in Bangladesh. The chronic nature of NCDs extends both patients' experience of suffering and duration of treatment, creating further economical strain on them. A recent survey states that prevention and treatment services for NCDs have been severely disrupted since the COVID-19 pandemic started, and low-middle income countries like Bangladesh are the most affected.

Women face a particularly high risk of NCDs and interrelated health challenges that are underpinned by inequality and marginalisation. Approximately two out of every three women die from an NCD, amounting to 16.8 million deaths globally. Apart from that women's health status also relates to the health and vulnerability of her children, being born to a malnourished mother increases an infant's risk of under-nutrition, low birth weight, and increased vulnerability to NCDs in adulthood.

Even when healthcare services are affordable, the socio-cultural status of women translates into reduced access to health resources and health literacy. Women from lower socio-economic backgrounds often give up accessing care or funds of medicines to provide food or education



materials for their children. Further, many young women and girls are unable to make healthcare decisions even for their children without the explicit approval of their husband or another family member.

Although both men and women are being affected by NCDs, there lies a different level of vulnerability to risk factors: women are more likely to become obese than men. Particular NCDs like CVDs seem to be diagnosed lately among women, revealing symptoms differently.

The modern way of life is a major cause of many non-communicable diseases, leading to serious consequences and tremendous costs for health care systems. The status of NCDs as the biggest killer is further fueled by air pollution and unhealthy diet which is

accompanied by highly processed foods rich in fat, sugar and salt. As these products have become more widely available, the prevalence of NCDs has exploded.

Above all, the implementation of sustainable solutions for NCDs calls for political action. Besides, acknowledging and researching the existing gender barriers in the community and healthcare system can be the first step to alleviating some of the harm caused.

The integrated initiative of both the public and private sector to start outreach programmes that help to address the gender bias will help make people more aware of such barriers and how it manifests.

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Bemcentinib: potential oral drug for COVID-19

MD EKHTAR MAHMUD

University of Bergen spin-off biotech company BergenBio proclaimed that their drug bemcentinib is fast-tracked in a phase-II clinical trial as a potential treatment against COVID-19.

Bemcentinib is a potent and highly selective AXL inhibitor. The drug is administered orally once a day as a capsule dosage form. It has been reported earlier to demonstrate potent antiviral activity in preclinical models against numerous enveloped viruses, including Ebola and Zika virus. Current data have expanded this to SARS-CoV-2.

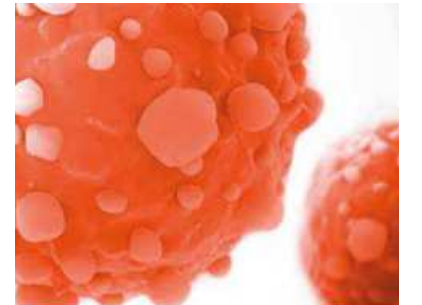
AXL kinase that is a cell membrane receptor is an important mediator of the biological mechanisms underlying deadly diseases. In COVID-19, AXL has

two synergistic mechanisms of action, it helps the virus enter the host cell and suppress the Type 1 Interferon immune response by host cells and in their environment. It has been confirmed by research data that bemcentinib impedes SARS-CoV-2 host cell entry and stimulates the antiviral Type 1 interferon response.

Richard Godfrey, Chief Executive Officer of BerGenBio said, "Bemcentinib has shown to be generally safe and well-tolerated in hospitalised COVID-19 patients. We look forward to receiving further data and continuing our analysis of the patient populations and datasets, and subsequently discussing these results with the market, regulators, industry and Government partners to determine the next steps."

If positive results are seen, bemcentinib will develop rapidly into the large-scale Phase III trials currently in progress across the United Kingdom.

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