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Covid-19: India sees record deaths as "black fungus" spreads fear

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India has recorded its highest weekly covid-19 death toll, reporting an average 4029 deaths a day in the seven days leading up to 13 May.

The increase comes at a time when the country's second wave was thought to have peaked, and raises further questions about India's true death toll, which most experts believe is far higher than official figures. Anecdotal reports suggest that deaths are rising unnoticed in the countryside even as they level off in India's cities, a fear reinforced by the discovery of more than 130 bodies in the Ganges over the past three days. Their relatives had probably been unable to procure wood for cremation, police speculated.

The B.1.617 variant of the coronavirus, widespread in India, was this week declared a variant of global concern by the World Health Organization. It has several mutations which could increase its virulence, and doctors have pointed to a swifter disease course than was seen in the first wave.

The B.1.617 lineage has now been found in 44 countries, said WHO, five more than last week. Besides India, the country with the most detected cases is the UK. India's second wave has also involved the B.1.1.7 lineage, often called the UK variant.

Maria Van Kerkhove, WHO's covid-19 technical lead, said on 10 May that as yet unpublished research¹ suggested some increased ability of B.1.617 to evade antibodies from vaccination or previous infection. A small study of vaccinated health workers in New Delhi found breakthrough infections in 16%, though most cases were mild.²

WHO's weekly situation report, released on 11 May, attributes India's current crisis to a combination of the variants' increased transmissibility, generally poor adherence to social distancing, and recent political and religious mass gatherings. There is little doubt that India's cases and deaths are being undercounted, Van Kerkhove told a press conference.

Ashish Jha, dean of the Brown University School of Public Health, tweeted, "There's an old saying in global health. You can ignore, fail to test for, or undercount whatever disease you want. But you can't ignore the dead. In India, the dead are telling us the disease is much worse than the official statistics."

He continued, "India can't be experiencing four thousand deaths a day. [That] would barely be a blip in the background" in a country that sees about 30 000 deaths on a normal day. Instead, India is "seeing crematoriums running 24 7 and running out of firewood." This indicates that the number of daily deaths from covid-19 is at least 25 000 and may be more, wrote Jha.⁴

Reporters from the *Washington Post* checked crematorium statistics in three cities—Agra, Bhopal, and Rajkot—and found in all cases that the statistics

released by state authorities appeared to capture only a small fraction of covid-19 deaths.⁵ Doctors also reported bodies leaving hospitals without being counted. Rajkot's daily newspaper *Sandesh* now carries a nine page obituary section instead of the usual one or two pages.

Authorities have sought to control information. The private Sun Hospital in Lucknow in Uttar Pradesh was raided by police and its director charged under the Disaster Management Act and the Epidemic Diseases Act with "creating an atmosphere of fear." After losing four patients when its oxygen ran out, the small hospital had posted notices outside asking patients who needed oxygen support to go to a larger centre, director Akilesh Pandey told Sky News.

Police in Uttar Pradesh had previously charged a man who tweeted a request for an oxygen cylinder for his grandfather.⁶

Black fungus and cow dung

The Indian public has a new problem to content with, as reports circulate of deaths from mucormycosis, popularly known as "black fungus," in patients recently treated for covid-19. The fungal infection of the sinuses is difficult to treat and often fatal.

Eye surgeons, who often have to remove an eye to contain mucormycosis, reported a dramatic rise in cases. Surat, a city of 6 million in Gujarat, reported 40 cases and eight lost eyes in 15 days. The health minister of Maharashtra, Rajesh Tope, said on 11 May that "there could be over 2000 mucormycosis patients in the state as of now."

Most cases occur in diabetic patients with poorly controlled blood sugar, about two weeks after recovering from covid-19. Some doctors blame overuse of steroids to treat covid-19, while others suggest the virus itself is the immunosuppressive factor helping the fungus to spread.

With health systems stretched to breaking point and vaccines in short supply, some are turning to traditional medicine. The Indian Medical Association (IMA) this week warned people against smearing cow dung and urine over the body, a practice which some believe protects against the virus. "There is no concrete scientific evidence that cow dung or urine work to boost immunity against covid-19, it is based entirely on belief," said IMA national president J A Jayalal. "There are also health risks involved—other diseases can spread from the animal to humans."

- Hoffmann M, Hofmann-Winkler H, Krüger N, et al. SARS-CoV-2 variant B.1.617 is resistant to Bamlanivimab and evades antibodies induced by infection and vaccination. bioRxiv 2021.05.04.442663 [Preprint]. 2021doi: 10.1101/2021.05.04.442663.
- Tyagi K, Ghosh A, Nair D, et al. Breakthrough covid-19 infections after vaccinations in healthcare and other workers in a chronic care medical facility in New Delhi, India. *Diabetes Metab Syndr* 2021;15:1007-8doi: 10.1016/j.dsx.2021.05.001.

- World Health Organization. Weekly epidemiological update on covid-19. 11 May 2021. www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19-11-may-2021.
- 4 Jha AK. 9 May 2021. twitter.com/ashishkjha/status/1391238139314847744.
- 5 Slater J, Masih N, Irfan S. In an Indian city, obituaries reveal missing coronavirus deaths and untold suffering. Washington Post. 6 May 2021. www.washingtonpost.com/world/2021/05/06/indiacoronavirus-deaths.
- 6 India coronavirus: man charged over oxygen SOS for dying grandfather. BBC News. 28 April 2021. www.bbc.co.uk/news/world-asia-india-56894757.
- 7 Soutik B. Mucormycosis: The "black fungus" maiming covid patients in India. BBC News. 9 May 2021. www.bbc.co.uk/news/world-asia-india-57027829.
- 8 Black fungus detected in covid-19 survivors, 8 lose eyesight in Surat. India Today. 7 May 2021. www.indiatoday.in/coronavirus-outbreak/story/black-fungus-mucormycosis-detected-covid19-survivors-8-lose-eyesight-surat-fungal-infection-symptoms-1799971-2021-05-07.
- 9 Sharma D. Over 2,000 cases, 8 deaths from Mucormycosis in Maharashtra so far, govt creating special wards: Health minister Tope. Hindustan Times. 11 May 2021. www.hindustantimes.com/cities/mumbai-news/over-2-000-cases-8-deaths-from-mucormycosis-in-maharashtraso-far-govt-creating-special-wards-health-minister-tope-101620721263680.html.

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