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NEWS BULLETIN

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 **The Indian EXPRESS**

Study says antibiotics can lead to life-threatening fungal infection because of disruption to the gut microbiome

Candida is a fungus that is a common cause of fungal infections in humans. The yeast infection thrush is caused by Candida. But it can also cause a life-threatening bloodstream infection called invasive candidiasis

By: [The Conversation](#) | Birmingham |
May 21, 2022 2:25:22 pm



Are you taking antibiotics? Here's how it affects the gut (Source: Getty Images/Thinkstock)

Fungal infections kill around the same number of people each year as [tuberculosis](#). They mostly take hold in people who are vulnerable because they have a defective immune system caused by an underlying disease, such as [cancer](#), or a [viral infection](#), such as HIV or COVID. Our new study shows that

Business Standard

'Made in India' skin test for tuberculosis to be introduced soon: Mandaviya

A newly approved skin test for tuberculosis diagnosis will soon be introduced in the country, Mansukh Mandaviya said on Thursday, underlining that the kit made in India will be of immense benefit

Press Trust of India | New Delhi
Last Updated at May 19, 2022

A newly approved skin test for [tuberculosis](#) diagnosis will soon be introduced in the country, Union Health Minister Mansukh Mandaviya said on Thursday, underlining that the cost-effective kit made in India will be of immense benefit to other high burden countries as well.

Mandaviya made the announcement while addressing the 35th board meeting of the Stop TB Partnership through video-conferencing here.....

Continued in page No.7

antibiotics can cause immune system defects that increase the risk of dangerous fungal infections.

Candida is a fungus that is a common cause of fungal infections in humans. The yeast infection thrush is caused by Candida. But it can also cause a life-threatening bloodstream infection called invasive candidiasis.

One of the risk factors for getting invasive candidiasis is [antibiotics](#). When we take antibiotics, we kill off some of our gut bacteria. This can create space for gut fungi (like Candida) to grow.

And if your intestines become damaged by chemotherapy or [surgery](#), then the Candida can get out of the gut and cause a bloodstream infection. Yet the most common way people get invasive candidiasis is not from their gut, but from their skin.

Patients in the ICU who are fitted with an intravenous catheter can get invasive candidiasis, especially if they have been treated with antibiotics.

Experts say it is important to be mindful about antibiotic use (Source: Getty Images/Thinkstock)

We wanted to find out exactly why antibiotics make fungal infections such as invasive candidiasis more probable.

To investigate, we treated mice with a broad-spectrum antibiotic [cocktail](#) and then infected them with Candida fungi. We compared them to a control group of mice that we infected with the Candida fungus, but didn't treat with the cocktail of antibiotics.

We found that antibiotic treatment made mice sicker when they were infected with the fungus.

In this fungal infection, it is normally the [kidneys](#) that become the target of the infection and mice get sick because their

kidneys stop working. But that wasn't the case here.

Although antibiotics made the mice sicker, they were controlling the fungal infection in the kidneys just as well as the mice that hadn't received antibiotics. So what was making them sick? It turned out the antibiotics caused a defect in the anti-fungal [immune](#) response, specifically in the gut.

Antibiotic-treated mice had much higher levels of fungal infection in the intestines than the untreated mice. The consequence of this was [gut bacteria](#) then escaped into the blood. Antibiotic-treated mice now had both a bacterial and a fungal infection to deal with. This was making them much sicker than the mice that did not have antibiotics.

To figure out why this was happening, we analysed the immune cells in the gut to figure out how antibiotics caused a defective anti-fungal immune response. Immune cells in the gut make small [proteins](#) called cytokines that act as messages to other cells.

For example, cytokines called IL-17 and GM-CSF help immune cells fight fungal infections. We found that antibiotics lowered the amount of these cytokines in the gut, which we think is part of the reason the antibiotic-treated mice couldn't control fungal infection in the [intestines](#) or stop the bacteria from escaping.

Potential solution

Some of these cytokines can be given to patients as immune-boosting drugs to help fight infections. To see if this might be an option for antibiotic-treated patients at risk for fungal infections, we injected our antibiotic-treated mice with some of these cytokines and found that we could make them less sick. Our findings mean that we may have a way to help patients who need antibiotics and are at risk of a fungal infection. Next, we wanted to find out if there

was a specific antibiotic that increases the risk for [fungal infection](#).

We treated mice with different antibiotics and discovered that vancomycin, an antibiotic commonly used to treat C diff infections in hospitals, made mice sicker after a fungal infection.

Vancomycin removed immune-boosting bacteria from the gut microbiome which are needed to instruct the [immune system](#) to make IL-17.

Is any of this research relevant for people? Our analysis of patient records suggests it is.

We looked at a large database of hospital records and found that similar bacterial/fungal co-infections might occur in humans after they have been treated with antibiotics.

Given the increasing problem of antibiotic resistance, it is now more important than antibiotics are used carefully. Our research shows antibiotics might provide an additional risk of dangerous fungal infections. However, antibiotics are a risk factor we can control.

Fungal infections remain an important problem for [human health](#), but studies like ours help us understand how to fight them.

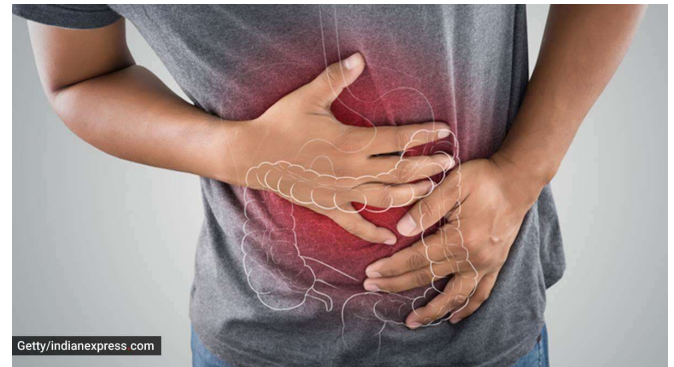


World Inflammatory Bowel Disease day: 'The incidence of IBD is increasing'

A recent editorial in *Lancet Gastroenterology and Hepatology* described South Asia (including

India) as a new frontier of IBD. Some studies have shown that IBD is as common in North India as in the western world.

By: [Express News Service](#) | Chandigarh |
Updated: May 21, 2022 8:35:10 am



It is important to pay attention to IBS (Source: Getty Images/Thinkstock)

MAY 19 is celebrated across the globe as World Inflammatory Bowel Disease (IBD). The disease is chronic inflammatory condition of the intestine and is of two main types: Ulcerative Colitis and Crohn's disease. IBD is increasing in India and this increase is largely driven by changes in the diet and westernization of lifestyle.

A recent editorial in *Lancet Gastroenterology and Hepatology* described South Asia (including India) as a new frontier of IBD. Some studies have shown that IBD is as common in North India as in the western world. Genetics, immune response, and changes in the dietary pattern also play a role in the causation of this disease. IBD can affect any age or gender. Usually, these patients have abdominal pain, diarrhoea, and bleeding in the stools. The diagnosis is often delayed because of the lack of awareness about the disease in the community, lack of access to colonoscopy, and confusion about other diseases like hemorrhoids, abdominal tuberculosis, and [cancer](#).

The Department of Gastroenterology, PGI, celebrated the day to raise awareness about the condition and also to improve the care and

treatment of patients living with IBD. Prof Usha Dutta, head, the Department of Gastroenterology, said that special lectures were organised where patients with IBD were educated about the disease, diagnostic tests, various treatment options, the role of diet, and health maintenance. Prof S K Sinha spoke about the nature and presentation of the disease, Dr Vishal Sharma spoke about the treatment options for the disease, and Prof Dutta spoke about the diet and lifestyle approaches for IBD.

“The incidence of the disease is increasing steadily in India, and there are many factors that are responsible for the rise, like a Westernised diet, lack of fresh fruits and vegetables in our diet, pesticides, stress, lack of sun, adulterated food, contaminated water, highly refined oils, which affect our intestine lining and the balance of good bacteria in the body is affected. It is paramount that people do not ignore symptoms like loose motions, pain in the abdomen, and blood in the stool, which continue for more than two weeks. A specialist must be consulted and no painkillers, steroids, or over-the-counter drugs must be used, which can cause further complications. Only medicines prescribed by a specialist must be taken, and alternative medicine treatments must be avoided. Also, treatment must not be stopped and regular follow-ups are essential to pick up early cancer. Most patients respond well to treatment, and in our OPDs, we do a follow-up of more than 1500 patients, with new patients added every month,” explains Prof Dutta.

As for the age group affected most by IBD, Prof Dutta adds, that it is seen across age groups, though the peak of IBD is seen in people between 20 and 40 years of age. Prof Dutta recommends early intervention by specialists, more awareness about the disease, changing our diets and adding more fresh and healthy food, use of natural probiotics like curd, lassi, and living an active and stress-free life.

On the occasion, an IBD card designed by the Department of Gastroenterology, in association with Colitis and Crohn’s Foundation, India was released. This card will provide a snapshot of the disease state and drug therapies with education material and will be helpful in improving various aspects of care including diet, preventive health, and medication. The card is designed with suggestions from other experts from AIIMS, Delhi, DMC, Ludhiana, and SGPGI, Lucknow. The card will be available to clinicians and gastroenterologists across the country for use and will be launched through a web meeting on World IBD Day.

THE HINDU

ASHA workers at forefront of ensuring healthy India: PM Modi

NEW DELHI MAY 23, 2022 11:34 IST

‘Delighted that the entire team of ASHA workers have been conferred the WHO Director-General’s Global Health Leaders’ Award,’ the Prime Minister tweeted.



Prime Minister Narendra Modi on Monday, May 23, 2022, hailed Accredited Social Health Activists (ASHA) workers after they were conferred with the World Health Organisation

(WHO) Director-General's Global Health Leaders' Award, and said [they are at the forefront of ensuring a healthy India](#).

India's ten lakh all-women ASHA volunteers were honoured by the WHO on Sunday for their crucial role in providing direct access to healthcare facilities in rural areas and their indefatigable efforts to rein in the coronavirus pandemic in the country.

Accredited Social Health Activists — or ASHA volunteers — are Indian government's affiliated health-care workers who are the first point of contact in rural India.

"Delighted that the entire team of ASHA workers have been conferred the @WHO Director-General's Global Health Leaders' Award," Prime Minister Modi tweeted. "Congratulations to all ASHA workers. They are at the forefront of ensuring a healthy India. Their dedication and determination is admirable," Mr. Modi said.

WHO Director-General Tedros Adhanom Ghebreyesus announced six awards on Sunday to recognise outstanding contributions to advancing global health, demonstrated leadership and commitment to regional health issues.

"The Accredited Social Health Activist Workers (ASHA) are more than 1 million female volunteers in #India, honored for their crucial role in linking the community with the health system and ensuring that those living in rural poverty can access primary health care services," the WHO said in a tweet.

"ASHA - means 'hope' in Hindi. These health workers provide maternal care & immunization for children against vaccine-preventable diseases; community health care; treatment for hypertension & tuberculosis & core areas of health promotion for nutrition, sanitation & healthy living," it said.

தினமணி

தமிழகத்தில் நிகழாண்டில் 34,239 பேருக்கு காசநோய் பாதிப்பு

காசநோயை முழுமையாக ஒழிக்கும் நோக்கில் மத்திய, மாநில அரசுகள் பல்வேறு முயற்சிகளை முன்னெடுத்துத் வருகின்றன. அதுமட்டு மன்றி, 2025-க்குள் அந்நோயை முற்றிலும் ஒழிக்க வேண்டும் என்ற இலக்குடன் பல்வேறு திட்டங்கள் செயல்படுத்தப்படுகின்றன.



அதன் பயனாக காசநோய் பாதிப்பு தொடர்பு விழிப்புணர்வு மேம்பட்டு வருகிறது. தமிழகத்தைப் பொருத்தவரை காசநோயைக் குணப்படுத்தும் விகிதம் கணிசமாக உயர்ந்து வருவதாகத் தகவல்கள் தெரிவிக்கின்றன. அந்த நோயின் தாக்கத்தால் பாதிக்கப்படும் நோயாளிகளில் 84 சதவீதம் பேரை முதல் சிகிச்சையிலேயே குணப்படுத்துவதாகவும், தொடர் சிகிச்சைகள் மூலம் மீதமுள்ளவர்களையும் பூரணகுணமாக்குவதாகவும் சுகாதாரத் துறை அதிகாரிகள் தெரிவித்துள்ளனர். அதுமட்டுமன்றி, சிகிச்சை காலத்தில் நோயாளிகளுக்கு ஊட்டச்சத்து அளிப்பதற்காக நிதியுதவிகளும் வழங்கப்பட்டு வருவதாகக் கூறியுள்ளனர். இந்த நிலையில், கடந்த இரு மாதங்களில் தனியார் மற்றும் அரசு மருத்துவமனைகளில் காசநோய் பாதிப்புடன் அனுமதிக்கப்பட்டிருந்தோரின் தரவுகளை ஆய்வு செய்தபோது நாடு முழுவதும் 7.60 லட்சத்துக்கும்

மேற்பட்டோருக்கு அந்நோய் தாக்கம் இருந்தது தெரியவந்துள்ளது. குறிப்பாக உத்தரப் பிரதேசத்தில் மட்டுமே 1.73 லட்சம் த்துத் க்கும் மேற்பட்டோர் காசநோயால் பாதிக்கப்பட்டுள்ளனர். தமிழகத்தை எடுத்துக் கொண்டால் 34,239 பேருக்கு அந்நோயின் பாதிப்பு இருந்தது. அவர்களில், தனியார் மருத்துவ மனைகளில் 7,264 பேரும், அரசு மருத்துவ மனைகளில் 26,975 பேரும் முதல்கட்ட சிகிச்சை பெற்றதாகத் தகவல்கள் தெரிவிக்கின்றன.

THE TIMES OF INDIA

Mumbai: BMC banks on AI to detect tuberculosis faster, screens X-rays in 3 minutes

TNN | May 22, 2022, 04.25 AM IST

MUMBAI: When Covid-19- the newest public health emergency-hit Mumbai, the BMC did more than roping in contract doctors, buying medicines and setting up field hospitals. It used the modern medical tool of artificial intelligence (AI) to track the SARS-CoV-2 virus.

A year later, it decided to use AI to combat one of the oldest scourges-tuberculosis. Between January 2021 and January 2022, it screened chest X-rays of over 14,000 people, using a special software that in three minutes diagnosed presumptive TB in a patient. BMC executive health officer Dr Mangala Gomare said, "AI has been beneficial because it tells us in three minutes whether an X-ray scan is normal. TB suspects are quickly identified, put through other confirmatory tests, and started on treatment."

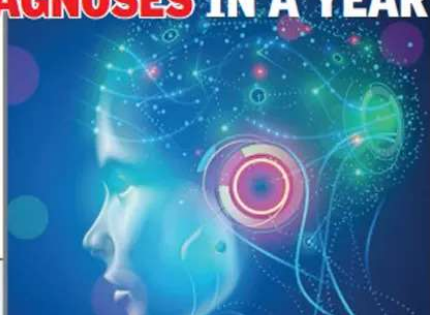
Prashant Warier, founder of the AI company Qure.ai that works with the BMC, said, "The AI-based screening has found many incidental TB cases that would otherwise have been missed." In other words, it found TB in patients who

underwent an X-ray scan for some other problem. Warier said 20-30% of the total TB patients in Mumbai last year were such "incidental" findings.

14,000 DIAGNOSES IN A YEAR

What is Artificial Intelligence (AI)

- ▶ Branch of computer science dealing with use of smart machines and software to do tasks that depend on human intelligence
- ▶ Instead of browsing reams of research, a doctor could use AI (machine learning models) to search a wide array of medical data to analyse patient's condition, care/medicines needed
- ▶ More commonly used in radiology
- ▶ Can analyze CT scans, X-rays, MRIs about 1 or more conditions



AI's uses in medicine

- Disease diagnostics
- Drug development
- Health monitoring
- Managing medical data
- Digital consultation
- Personalised treatment

Advantages

- Accuracy
- Decreased workload
- More time for critical cases
- Saves money
- Better monitoring

Disadvantages

- Loss of jobs
- Lack of human touch

AI has been around in medicine for a few years in the form of robotic surgery, virtual assistants linking doctors and patients, radiology, among others. The appearance of Covid-19, however, cemented AI into public health. When the pandemic started in March 2020, the BMC deployed Qure.ai's software at 15 sites, including Covid centres and mobile screenings in slums. RT-PCR kits were not easily available at this juncture, forcing doctors to depend on AI-supported Xray. The Central TB division has recently asked districts to screen 3,500 presumptive suspects for every 1 lakh population. "With the CTB and the goal of TB elimination by 2025, AI screening strategy will help," said Dr Gomare. Already, 9 TB clinics at civic hospitals have got the AI software. NGO PATH's TB technical director Shibu Vijayan said it tested the Qure.ai software in Nagpur in 2017. "We were finding 20% extra cases," he said, adding the software would be rolled out in 10

other states in India. Internal medicine specialist Dr Swapneil Parikh said, "However, AI is only a tool and its usefulness depends on how well it is used. You have to use AI in conjunction with a doctor. It isn't a cure-all

Continued from page no.1

'Made in India' skin test for tuberculosis to be introduced soon: Mandaviya

.....Underscoring the severe impact of the COVID-19 pandemic on [tuberculosis](#) (TB) programmes in high burden countries, the minister said, "Under the leadership of Prime Minister Narendra Modi, several new initiatives have been taken in India to turn the crisis into an opportunity."

Among these are the 'bidirectional testing' of TB with Covid, house-to-house TB detection campaigns, scaling up of rapid molecular diagnostics at sub-district levels, use of artificial intelligence and digital tools, 'Jan Andolan', and most importantly, the decentralisation of TB services to Ayushman Bharat Health and Wellness Centres as part of comprehensive primary healthcare, Mandaviya added.

He also informed that a new initiative 'Adopt people with TB' will be launched this year based on Indian values of collectivism to call upon corporates, industries, organisations, political parties and individuals to come forward and adopt TB-infected people and families, and provide them nutritional and social support, a health ministry statement said.

"We are also actively involving elected representatives in India like the Members of Parliament, Members of Legislative Assemblies in the states, members of urban local bodies and panchayat representatives at the grassroots

level in raising awareness and advocating for TB across the country," the minister said.

Emphasizing on boosting TB prevention activities, Mandaviya said, "Starting later this year, we will introduce a newly approved made in India TB infection skin test called c-TB." He further said this cost-effective tool would be of immense benefit to other high burden countries.

Mandaviya expressed condolences for all lives lost due to COVID-19 and TB, and thanked health workers, caregivers and community members for relentlessly working with people affected by TB, the statement said.

The Union health minister noted that 2022 is an important year since it is the target year for many of the commitments made in the UNHLM of 2018. He also laid stress on discussing bold and ambitious commitments in the board meeting for the upcoming UNHLM of TB in 2023, the statement added.

Mandaviya congratulated Minister of Health of Indonesia Budi Gunadi Sadikin for being a champion in prioritising TB under the Indonesia Presidency of G20. He also informed that India, under its 2023 Presidency of the G20, will focus on two health issues TB and cervical cancer.

He reiterated India's commitment to end TB, and urged everyone to cooperate and collaborate at every level to achieve the "End TB" goals.

Hindustan News Hub

DISCOVER THE ART OF PUBLISHING

Tuberculosis: Government will start an initiative to adopt TB patients, aiming to eliminate the disease by 2025

By [Hindustan News Hub](#) | May 16, 2022

New Delhi: To achieve the goal of ending TB by 2025, the government will soon launch a program where people and institutions can block, ward or adopt a patient and provide nutrition, treatment and professional support to TB patients. Official sources said on Monday that in a letter to all the states and union territories, the Union Health Ministry has requested to make all preparations to start 'Community Support to TB Patients' program at campaign level in all districts and blocks. He said that the initiative is likely to be formally launched in the first week of June. The project will create a system so that elected representatives, NGOs, individuals, institutions (both private and government) and partner blocks, urban wards or districts can support efforts to end TB by adopting them. An official source said that donors will provide nutritional support, treatment as well as commercial support to TB patients who consent to the initiative. The minimum period for a commitment to provide additional support to a TB patient will be one year.

Maharashtra News:then Congress will come out of Mahavikas Aghadi! NCP's complaint to Sonia Gandhi, Nana Patole said soon the effect will be seen

He said that the patient would be given the option to register or not to register for the program and their decision would not affect the existing services available to the patients. After this, the health workers will get them filled in the consent form. This consent will be registered by the concerned health worker on the 'Nikshay' (Ni-Finish, Tuberculosis-TB) portal. The challenge for TB is to focus on social determinants such as nutritional support, living and working conditions, and increasing access to diagnostic and treatment services, an official said.

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