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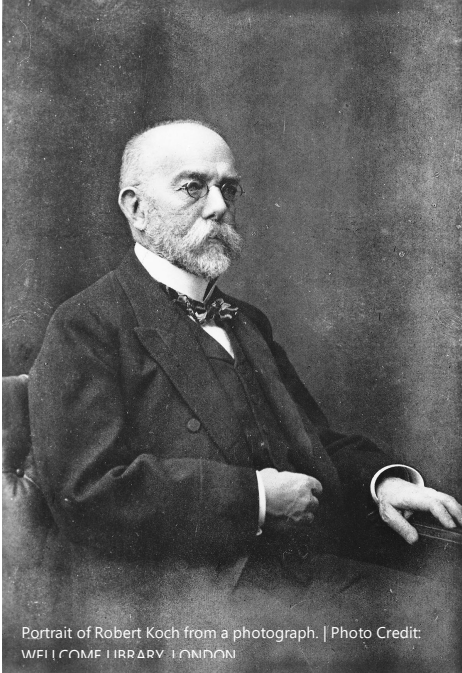
A weekly publication from NIRT Library

THE HINDU

Koch discovers the cause of tuberculosis

A.S.Ganesh

APRIL 10, 2022 00:57 IST



Portrait of Robert Koch from a photograph. | Photo Credit: WELLCOME LIBRARY, LONDON

In a lecture on March 24, 1882 and in a paper based on the lecture 17 days later on April 10, German physician Robert Koch announced his discovery of the bacteria that causes tuberculosis. Considered one of the founders of bacteriology, Koch won the 1905 Nobel Prize in Physiology or Medicine "for his investigations and discoveries in relation to tuberculosis." A.S.Ganesh talks about Koch, who worked tirelessly to find out more about one of the

world's deadliest diseases...

Tuberculosis (TB) is one of the leading causes of death worldwide and the second leading infectious killer, only behind COVID-19. It spreads from one person to another through the air and when someone develops active TB disease, it most often affects their lungs.

THE HINDU

டிபி மற்றும் காசநோய் குறித்த இந்த கட்டுகதைகளை இனியும் நம்பாதீங்க...

c-mahantesh b | Samayam Tamil

Updated: 24 Mar 2022, 10:11 am

காசநோய் உடலில் ஆபத்தை ஏற்படுத்தக்கூடிய ஒரு நோயாகும். ஆனால் அதனால் ஏற்படும் பாதிப்புகளை பலர் கண்டுக்கொள்வதே இல்லை. அதற்கு காரணம் காசநோய் குறித்து இருக்கும் கட்டுகதைகளே. எனவே காசநோயின் கட்டுகதைகள் மற்றும் அதன் உண்மை தன்மையை நாம் அறிய வேண்டும்.

இந்தியாவில் அதிகமான மக்கள் காசநோய் தொற்றால் பாதிக்கப்படுகின்றனர். ஏனெனில் இங்கு காசநோயின் பரவல் விரைவான விகிதத்தில் அதிகரித்து வருகிறது. சரியான சமயத்தில் சிகிச்சையளிக்கப்படவில்லை எனில் காசநோய் ஆபத்தானதாக மாறும். எனவே காசநோய் குறித்து சரியான விழிப்புணர்வை பெற வேண்டியது முக்கியமாகும்.காசநோய்

மைக்கோ பாக்டீரியம், காசநோய் பாக்டீரியா ஆகியவை காரணமாக காசநோய் ஏற்படுகிறது. இது நுரையீரலை மட்டுமின்றி உங்கள் மூளை, சிறுநீரகம், குடல் மற்றும்

Continued in page No.26

As of 2020, eight countries account for two-thirds of the total TB cases in the world, with India holding the ignominy of leading the count.

The fact that TB is both curable and preventable is the only silver lining, something for which we need to be thankful to Robert Koch, a German physician who discovered the bacteria that causes the disease.

Born to a mining family in Germany in 1843 as the third of 13 children, Koch attended the University of Göttingen and graduated studying medicine in 1866. After serving as a physician in various provincial towns, he was appointed the district medical officer in Wollstein in 1872.

Starts with anthrax

Wool production was a major industry in this region and that meant that Koch saw a fair amount of anthrax patients, with various degrees of severity. Koch believed that these patients were workers who unknowingly ingested a microscopic organism that was in the hide of animal carcasses. Finding himself to be helpless at their sides, Koch was driven to find out the cause of anthrax and even a cure, if possible.

Living in a small home, Koch's consulting area was in the house's parlour. He used a curtain to divide this room in half and set up a small laboratory for himself. When the last patient was out of his consulting room every evening, the doctor then worked in his makeshift laboratory and conducted his research. It took a few months, but in 1876 Koch was able to identify a microbe named *bacillus anthracis* as the cause of anthrax.

Despite this success, Koch struggled to find a university position that would have enabled him to pursue full-time research. It wasn't until 1880 that he finally got his wish as he was appointed the government advisor to the Imperial Department of Health in Berlin.

Works alone

Equipped with time and the necessary tools, he decided to investigate TB. Even though the dominant thought at that time considered TB to be hereditary, Koch was convinced that it had to be infectious.

Koch locked himself in his lab on an everyday basis, worked alone, and had his answer after almost six months. Koch isolated and determined how to culture *mycobacterium tuberculosis*, the germ that we now know causes TB.

Special lecture

Far from a convincing lecturer, Koch had his audience spellbound when he presented his findings at the Physiological Society of Berlin on March 24 1882. The sheer beauty and pure logic left them awestruck, leaving them in no doubt that they were witnesses to scientific history. German medical scientist Paul Ehrlich, who went on to win the Nobel Prize for Physiology or Medicine in 1908, was among those in attendance, and he later mentioned it as "the most gripping experience" of his scientific life.

Koch published his lecture "The Etiology, or Cause, of Tuberculosis" in *The Berlin Clinical Weekly* on April 10, 1882. The deadly nature of TB meant that the discovery wasn't only carried in leading medical journals, but also made it to the front pages of newspapers worldwide, making Koch popular overnight.

Koch also found out the cause of cholera, even though he was unaware that it had already been achieved decades earlier. He also believed that he had a cure for TB when he developed tuberculin. Even though it turned out to be not therapeutic, tuberculin did emerge as a diagnostic tool. Koch's tireless efforts in the field led to him winning the 1905 Nobel Prize in Physiology or Medicine "for his investigations and discoveries in relation to tuberculosis."

Koch's discovery 140 years ago was an important step towards making TB both preventable and curable. The disease, however, continues to wreak havoc as an estimated 10 million people worldwide fell ill and 1.5 million people died because of TB in 2020. There is still plenty to do before TB can become a thing of the past.

THE HINDU

Tamil Nadu plans to test for TB along the same lines as COVID-19

Serena Josephine M. | CHENNAI APRIL 09, 2022 19:51 IST

This is aimed at reducing estimated disease incidence rate to 44 per one lakh population by 2025

Tuberculosis (TB) case findings that were hit in the midst of the COVID-19 pandemic have improved with targeted interventions in the State. Now, to reduce the TB burden to 44 per one lakh population by 2025, Tamil Nadu is aiming at testing more for TB along the same lines of COVID-19 to detect more cases.

Among the key objectives of the National TB Elimination Programme (NTEP) is to reduce the estimated TB incidence rate to 44 per one lakh population and reduce estimated mortality due to TB to 3 per one lakh population by 2025.

"We are trying to reduce the burden of TB. So, like for COVID-19, we need to test more to detect more cases. Nearly 30% case finding was hit in 2020 due to the pandemic-induced lockdowns. Now, we have bounced back to 2019 levels. TB detection rate has improved. Private sector notification of cases took a hit during COVID-19 and has started to pick up now," Asha Frederick,

Additional Director of Medical and Rural Health Services and State TB Officer, said.

According to data available with the State TB Cell, the presumptive TB examination rate (annualised) was 792/lakh in 2020 and 1,121/lakh in 2021 against the target of 1,500/lakh. The total notification against the target of 1,45,000 was 49% in 2020 and 57% in 2021. Public sector notification against the target (90,000) went from 60% in 2020 to 72% the following year, while private sector notification against the target (55,000) was 30% in 2020 and 34% in 2021.

Treatment adherence patterns have improved a lot, she added. "Presently, the cure rate is 84%. The death rate was 5% till 2020. Post-COVID, it is 6%," Dr. Frederick said.

To improve TB case finding, another 28 new mobile diagnostic units for active and targeted case finding in all districts are being added. "Already, 14 units are plying in the State. The Greater Chennai Corporation alone has seven units. The 42 units will take up screenings in every district. We will not be able to get sputum from everyone. So, X-rays will be taken," she said.

Improving TB notification is among the focus areas. "Every doctor knows that TB notification is mandatory under the Clinical Establishments Act. Still, there is a gap. To bridge this gap, we are piloting FAST — Find Access Support Treat — centres in Coimbatore," Dr. Frederick said.

She added: "To step up TB elimination in the private sector, a coalition of professional medical associations, consortium of private hospitals was formed in Coimbatore. The FAST centres are established in the private sector to provide standards of TB care for patients seeking care in the private sector."

Challenges faced

TB was a challenge in urban and densely populated areas such as Chennai, she said,

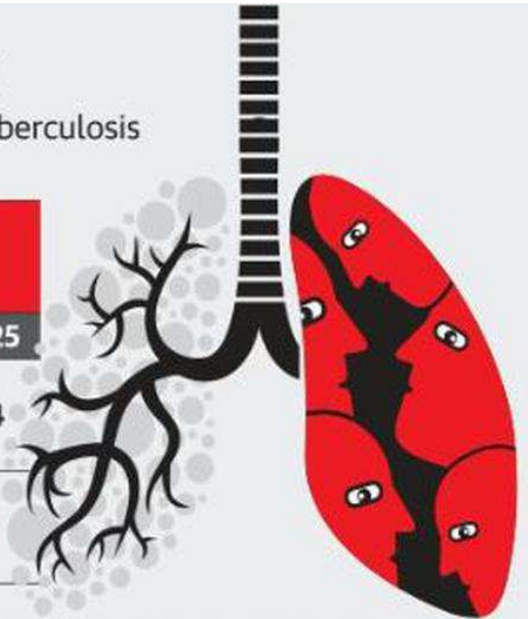
adding: "In urban conglomerates, we have a more vulnerable population and more migrants.

"At the sub-district level, each MLHP covers a population of 5,000. We are engaging them to

TB trauma: eyeing elimination

Measures are being undertaken to reduce the burden of tuberculosis in the State. Here are the goals of the mission

Objectives of National TB Elimination Programme for T.N.	Baseline	Target		
	2015	2020	2023	2025
To reduce estimated TB incidence rate (per 1,00,000 population)	217	142	77	44
To reduce estimated mortality due to TB (per 1,00,000 population)	32	15	6	3



KEY DATA

- Presumptive TB examination rate (annualised) was 792/lakh in 2020 and 1,121/lakh in 2021
- Total notification per lakh- 90/lakh in 2020 and 106/lakh in 2021, against a target of 185/lakh
- In 2021, 82,954 TB patients were identified, of which 18,461 were from the private hospitals
- **Drug Resistant TB:** In 2021, 1,287 H mono/poly patients, 1,059 MDR TB patients and nine XDR TB patients were identified and appropriate treatment was started

STRATEGIES IN PLACE FOR TB ELIMINATION



To improve TB case finding, 14 mobile X-ray vans are utilised for active and targeted case finding in all districts. Twenty-eight new units are being added



State TB Prevalence Survey is being undertaken in collaboration with ICMR-NIRT



A monthly difficult-to-treat TB clinic serves as a State-level clinical decision support system

SOURCE : STATE TB CELL

Social determinants are still a challenge. In the rural community, stigma is one of the major challenges, and we are trying to create awareness."

As a way ahead, there are plans to use *Makkalai Thedi Maruthuvam* to take up symptomatic screening of the population through the mid-level health providers (MLHP).

actively initiate symptomatic screening of the population, such as for low grade fever and

cough. We will take up vulnerability mapping to know the vulnerable population, have a constant vigil and keep track of them," she said.

Time to eliminate 'silent killer' TB, say top scientists

HYDERABAD MARCH 31, 2022 22:21 IST

Top scientists from across the country gave a call for putting an end to the prevalence of the 'silent killer' called tuberculosis (TB), which had shown an increasing trend in these COVID years.

TB is a serious infectious bacterial disease that mainly affects the lungs and is spread through aerosols when an infected person coughs or sneezes.

World Health Organisation (WHO) chief scientist Soumya Swaminathan, in her message, underscored the need to speed up clinical trials for vaccines in the making and also diagnostics. She was addressing a webinar on "TB - Silent Killer: understanding the disease, dynamics and diagnostics and treatment", organised by the Tata Institute for Genetics and Society (TIGS) on Thursday.

Scientists from across the country, including CSIR-Centre for Cellular & Molecular Biology (CCMB) director Vinay Kumar Nandicoori and former director and TIGS director Rakesh Mishra also participated.

Dr. Swaminathan said that India can show the way to the world by taking up an early detection programme engaging the communities including voluntary bodies, making use of rapid diagnostic tests and best available therapies, as the incidence is vastly under-reported.

Dr. Rakesh Mishra said TIGS, located in NCBS (National Centre for Biological Sciences) campus in Bengaluru, is a non-profit institute with an objective to deal with issues like crop improvement, rare genetic diseases and

infectious diseases. "We are keen to intervene into novel diagnostics for eliminating TB and it needs a multi-pronged approach," he said.

Dr. Vinay Kumar Nandicoori gave a presentation on latest lab studies on the disease progression and pointed out that TB has killed more people over the years than COVID. NCBS scientist Varadha Sundaramurthy said its a big challenge to stop entry of bacteria into the body as receptors are many and highlighted the importance of host based therapeutics.

Post-graduate Institute of medical education & research (PGIMER), Chandigarh's Sadhana Sharma gave an overview of the promising nanotechnology based drug therapy which can get over the limitations like patients non-compliance and drugs toxicity. Targeted drugs, right dose, right time, better adjuvant to avoid inflammation will help prolonged retention of drugs in the body, she added. AllMS-Delhi's Urvashi B. Singh said the institute has been witness very serious cases of TB during the pandemic.

Delayed and missed vaccines can seriously impact children

MARCH 31, 2022 14:20 IST



Introduction

The COVID -19 pandemic has led to major disturbances in the delivery of essential health services, including routine immunisation services in many countries. The WHO reported major disruptions in vaccination in many countries around the globe. According to statistics, approximately 80 million below the age of 1 year live in countries where routine immunisation services were disrupted, which put the residents at risk of developing vaccine-preventable diseases.

Delayed or Missed Vaccine – Impact on the child's health

When we go through history, the African Ebola outbreak in 2014-2015 increased the number of cases of Measles and Tuberculosis due to public health system failure. A sustained period of disrupted immunisation can result in an accumulation of susceptible individuals, which in turn can lead to disease outbreaks. Even in normal days (not at the time of an epidemic or a pandemic,) a delay in vaccination is not good for the health of a child. Children below the age of 5 have an under-developed immune system, especially those younger than age 1 year. Along with breast milk and a balanced diet, vaccine is the next important tool for the well-being of the baby. Missing a vaccine puts your child at risk of contracting vaccine-preventable diseases. A delayed vaccination means making them susceptible to infections. The longer your child remains unimmunised, the higher their chances of getting exposed to and contracting diseases.

Delayed vaccination in children can also put other family members at risk, especially the elderly, those with compromised immunity due to chronic health issues, and infants.

What should be done if certain vaccines are delayed or missed?

Catch-up vaccinations are administered to people who have not been previously vaccinated or have missed a scheduled dose of

vaccine. This solution provides optimal protection against diseases as quickly as possible by completing an individual's vaccination schedule in the shortest and most effective manner.

Multiple vaccines can be administered in the same session without any fear of any increased adverse effects. We may use the shortest acceptable interval between two doses of the same vaccine. When missed, the booster doses may be given at the next opportunity available at the earliest. Parents, who are not comfortable visiting the hospital (particularly in this covid-19 pandemic situation), can avail of home vaccination services that may be available in their city through their hospital. Parents can take prior appointments (online or telephonic) for vaccination to reduce the waiting time in the hospital.

Conclusion

The Covid-19 pandemic for the last 2 years has definitely affected the immunisation process in children, but with the above measures, we can accelerate the vaccination process for children.

Finally, we, Rainbow children Hospitals across India, have successfully vaccinated children during this pandemic maintaining Covid norms, with separate vaccination points and home vaccinations. Our vaccine storage facilities are on par with international standards. We take utmost care in maintaining a cold chain- from storage to the point of administration. We have experienced staff and doctors who can handle any adverse events due to vaccination. We also administer vaccines to NRI children in accordance with respective countries' vaccine schedules.

[Dr. B.S.C.P. Raju](#), MD DCH, Fellowship in [Neonatology](#), Consultant [Neonatologist](#) & [Pediatrician](#), [Rainbow Children's Hospital, Vijayawada](#)

Survivors join movement for TB-free India

Ramya Ananthakrishnan | Anupama Srinivasan
MARCH 27, 2022 00:01 IST



But even when a person with TB has access to diagnosis and medicines, what is often missing is an emotional touchpoint

When Kanchan Kumari, a tuberculosis (TB) survivor from Muzaffarpur in Bihar first spoke to Sunita*, a resident of the same district who was on TB treatment, all seemed well. By the time they spoke next a few weeks later, just after the brutal second wave of COVID-19, Sunita had lost her mother, was being ill-treated by her husband's family, had nearly run out of medicines and was emotionally distraught. Over the next few days, Kanchan counselled Sunita, spoke to her family, supported her to travel to her maternal home, personally spoke to the health facility staff and arranged for Sunita to collect the medicines she needed. Without Kanchan's support, Sunita is sure that she would have given up her treatment.

Over 25 lakh people are diagnosed with TB in India every year. For many of them, the TB experience is a lonely one. What is often missing for a person with TB is an emotional touchpoint, a friend and confidant who will patiently answer their questions

and provide them with reassurance, someone who will empathise with their TB experience.

This felt need is now being met by trained TB survivors, who are equipped with the knowledge and skills they require to provide essential information and emotional support to people with TB and their families.

For too long, the response to TB has been primarily a biomedical one, driven by the need to manage clinical aspects of the disease. As a result, we have not paid enough attention to the psychosocial and emotional needs of people with TB. When a person is diagnosed with TB, their first reaction is inevitably shock and anxiety, fuelled by the fear of stigma and discrimination.

Globally, there is substantial evidence on the impact of engaging affected communities — people living with HIV for instance, who have steered global efforts on HIV and AIDS. Advocates from among people living with mental illnesses and disabilities have helped change attitudes and shape person-centred approaches. Other examples come from cancer support groups which provide a sense of community and solidarity. For those affected by a disease, survivors offer tangible hope that they too can be cured and can go on to lead productive, meaningful lives.

Making progress

In India, the engagement of TB-affected communities was sporadic until some years ago, with a few active TB advocates who shared their personal experiences on various platforms. In general, there was an assumption that TB survivors would not be willing or interested to participate in the TB response, given the short-lived nature of the disease.

However, active outreach to TB survivors has proven otherwise: while not every TB survivor is interested in working with their communities, a significant number are, all driven by a simple but

powerful motivating factor — “I do not want anyone else to suffer like I did.” In 2016, we began to work systematically with TB survivors, with support from the United States Agency for International Development. By 2019, working closely with the National TB Elimination Programme (NTEP), we had built the capacity of over 300 TB survivors and empowered them to become Champions. The training was followed by a six-month immersion programme, designed to help new Champions interact with the health system and people affected by TB, and understand the ground realities.

During this period, we also encouraged TB Champions to come together to form survivor-led networks — today, there are several networks at the national and State levels, many formally registered. When Abhinandan, a young TB Champion from TB Mukta Vahini (TMV) in Bihar, was struggling to convince a woman with TB to continue her treatment, he turned to Abhishek, a founding member of TMV for guidance. With the latter’s help, Abhinandan was able to convince the young woman to not give up on treatment. Recently, a delegation from the TB Mukta Chhattisgarh Foundation, the State’s survivor-led network, met the State Health Minister to advocate for increased nutritional support for people with TB.

From a TB Champion’s perspective, it was evident that their deepest satisfaction came from talking to a person with TB and helping them cope with their treatment. In many ways, the tangible nature of peer support appealed to them, grounded as it was in personal and direct interactions. As their TB Champion identities became well established in their communities, people began to approach them with health issues beyond TB — this was most evident during the pandemic.

Beyond the impact on TB, TB Champions reported significant personal empowerment including greater confidence, better public speaking skills, increased mobility, digital literacy and financial

independence. They also experienced an enhanced recognition within their communities and wear the TB Champion label proudly.

At the policy level, the need for engaging TB Champions is now well recognised across India, with formal acknowledgement by the TB programme in the National Strategic Plan and the recent Community Engagement guidelines. The NTEP is currently in the process of scaling up training of TB Champions across India, with the goal of having at least two in every block, — over 15,000 Champions in the country.

Building on this national-level mandate, States must embrace the engagement of TB survivors. States can formally scale up the training and engagement of TB Champions through increased investment via both annual Programme Implementation Plans and State funds. At the district and sub-district levels, mechanisms to work in close coordination with trained TB Champions must be established and sustained. Continued investment in refresher training and capacity-building for TB Champions is critical. They must also be adequately compensated for their time, commensurate with the level of effort we expect from them.

From the perspective of a person with TB, the peer support provided by TB Champions has helped meet their emotional needs and improve treatment literacy. Their relationships with TB Champions are often deeply personal, as we saw with Kanchan and Sunita. Access to peer support can not only improve treatment outcomes for people with TB but also motivate them to become TB Champions themselves, thereby strengthening community participation in TB.

*Name changed for privacy

(The authors work at REACH, a non-profit organisation based in Chennai and working on tuberculosis for over two decades)

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Detection of TB and treatment still a challenge, says Health Secretary

CHENNAI MARCH 26, 2022 00:48 IST



'Private sector notification is very few in many parts of State'

Noting that tuberculosis remained a challenge but that it had taken the backseat, Health Secretary J. Radhakrishnan on Friday said that lessons learned in COVID-19 to test, track, treat and follow appropriate behaviour applied to all diseases.

Stressing on the need to concentrate on TB during an event organised by REACH, an NGO, in line with World TB Day 2022, he said: "Still, private sector notification of cases is very poor in many parts of the State, while government sector notification was equally challenging."

Tamil Nadu had fixed a target to reduce the incidence of TB to 77 per lakh population and deaths due to TB to six per lakh population by 2023.

"This is a tough challenge not because we do not have the facilities but because we are not diagnosing (cases)," he said.

Tough challenge

The target of achieving zero TB cases, zero deaths and reducing stigma by 2025 was a tough challenge, he told reporters.

Asha Frederick, additional director of Medical and Rural Health Services and State TB Officer, said they had asked private medical colleges to have centres for patients with drug resistant TB.

She said that REACH initiatives helped in case detection and notification in the private sector and delivery of services to the people.

V. Ramasubramanian, consultant, Infectious Diseases and Director of Capstone Clinic, said now at least 70% of TB cases were outside the lungs such as lymph node TB and renal TB.

"The occurrence of drug resistant TB is on the rise," he said and added that stigma still existed and many people thought that TB was associated with a low socio-economic background. He stressed the need for increasing public private partnership for TB.

Ramya Ananthakrishnan, director of REACH, said that more than 200 women TB leaders were identified, trained and engaged in TB screening. Nearly 1.4 million persons were screened by the women TB leaders and nearly 3,000 were diagnosed with TB.

Nalini Krishnan, founder-director of REACH, said the TB champions and women TB leaders served as the link between treatment and the patient. Directors of Nakshatra centres, women TB leaders and TB champions were felicitated.

Padmapriyadarshini, director of National Institute for Research in Tuberculosis, was present.

EFFECT OF MISSED IMMUNIZATIONS IN CHILDREN DURING THE COVID ERA

MARCH 25, 2022 11:57 IST



COVID-19, as with pretty much everything else, has also disrupted vaccination services all over the world. The fear of contracting the virus has kept people away from hospitals for new born screening, antenatal care and vaccinations. With vaccination campaigns also taking a backseat due to the pandemic, the risk of disease outbreaks is high. This means that many children are unvaccinated or under-vaccinated which, in turn, is putting their lives at risk of vaccine-preventable diseases and deaths.

The first wave of COVID-19 had brought in lot of uncertainty and fear in the minds of people. There was more fear attached to the safety and well-being of children. This also meant that many children missed out on their regular vaccines and lagged behind in their vaccine schedules. According to data released by WHO, more than 230 lakh children globally missed their vaccines in 2020, with South Asian countries being hit the worst. In India, about 46 lakh children missed their vaccines in 2020, of which almost 30 lakh children

missed their first dose of measles and DPT vaccines. This interference by COVID-19 in the vaccine schedule of kids is likely to increase the risk of future outbreaks of childhood vaccine-preventable diseases and infections. According to WHO Director-General, Dr Tedros Adhanom Ghebreyesus, "Multiple disease outbreaks would be catastrophic for communities and health systems already battling COVID-19, making it more urgent than ever to invest in childhood vaccination and ensure every child is reached."

If your child is one of the many children who have missed their vaccines and deviated from their general vaccine schedule, here are a few FAQs that might help you make up for the lost schedule and time.

1.What are the vaccines that could/should not be missed as per the vaccine schedule?

Under the Universal Immunization Programme, Government of India has mandated seven vaccines to prevent certain diseases, namely- Diphtheria, Pertussis, Tetanus, Polio, Measles, Mumps, Rubella, severe form of Childhood Tuberculosis and Hepatitis B, and Haemophilus influenzae type b (Hib). The primary doses of these vaccines have to be administered within the first 6 months of birth and are very crucial immunizations that should not be missed under any circumstances. In addition to these, there are few other important vaccines like typhoid, rotavirus, Hepatitis A and chicken pox. These are not mandated by the Government but are good to take.

2.Children are anyway confined and isolated at home and not meeting their friends, not exposed to external environment. Is it still necessary to keep up the vaccination schedule?

Basically, there are two types of immunity- natural and acquired. Natural immunity is what we develop naturally through nutrients in food or by exposure to common environmental pathogens. Vaccines provide us with acquired immunity. Both types of immunity are absolutely necessary to fight

infections. Due to the current pandemic situation, kids are being deprived of exposure to natural pathogens, thus affecting their natural immunity. By not administering the vaccines, these kids are being deprived of acquired immunity too. When they are exposed to any of these pathogens later, they might face a mildly severe to severe case of the infection.

3. Why choose Rainbow Children's Hospital?

Rainbow Children's Hospital has over 22 years of experience. This, undoubtedly, means that we are one of the best child healthcare service providers. We have one of the best and latest infrastructure. We follow all the rules and regulations laid down by the Ministry of Health, Government of India with respect to vaccine procurement, storage and administration- cold-chain, temperature-controlled supply chain, storage at appropriate cold temperatures until they are administered to the patient. We follow very stringent quality control measures too through out the entire process, right from procurement to administration. The nurses at Rainbow Hospitals are very well trained to handle children and administer the vaccines in the most efficient way.

[Dr. Shashwat Mohanty](#), DNB(Peds), DCH, IFPCCM(IAP-CPCC), Fellowship in [Pediatric Critical Care Medicine](#), [Consultant Pediatric Intensivist and Pediatrician](#) DNB, Rainbow Children's Hospital, Visakhapatnam



World Vision India supports 1,714 TB patients in Krishna and Guntur

APRIL 09, 2022 20:33 IST

World Vision India (WVI), a non-government organisation focussed on supporting children in need, has been extending nutrition support to

1,714 Tuberculosis patients in Krishna and Guntur districts under the 'Focused Approach Towards Childhood Tuberculosis (FACT)' project.

In a release, WVI director of health Reeti Tiwari Dass said that under the FACT project, nutrition support was being given for six months to drug-sensitive patients and 24 months to drug-resistant patients for the past two years. She said each nutrition kit consisted of groceries, including toor dal, green gram, chana dal, ragi flour, groundnut, jaggery, dates and others.

"Though the government provides ₹500 towards nutrition support through the Direct Benefit Transfer (DBT) scheme, many poor TB patients and their families have a greater need. In collaboration with the State and district National Tuberculosis Elimination Programme units, we are filling the gap and extending support in the districts of Guntur and Krishna," Dr. Reeti said.

She said more than four lakh people had been screened through WVI's Active Case Finding campaigns in the last two years.



Researchers call for real-time tuberculosis data like Covid-19 dashboards

According to a report in the The Lancet Respiratory Medicine journal, Covid-19 has set tuberculosis control efforts back by about a decade.

Written by [Anuradha Mascarenhas](#) | Pune | Updated: April 4, 2022 6:02:35 pm

Researchers from the country and across the world have called for real-time dashboards for tuberculosis cases and deaths much like the ones

that have been used for the monitoring of [Covid-19](#).



According to a report, Covid-19 has set tuberculosis control efforts back by about a decade. (Express File)

“Instead of annual tuberculosis reports, global and national public-facing dashboards and trackers reporting real-time numbers of tuberculosis cases and deaths, including monitoring of trends over time, would be a useful addition to tuberculosis monitoring. They would keep the public informed and hold services accountable at national, regional, and global levels,” researchers said in a new series Tuberculosis in the time of Covid-19 published in The Lancet Respiratory Medicine journal.

“It is not widely appreciated by the lay public that although the direct death toll from Covid-19 is estimated to be about 4.5 million people over an approximately 18-month period, the sustained death toll from tuberculosis over the past decade has been close to about 20 million people. A public-facing dashboard for tuberculosis has now been instituted in the Western Cape province of South Africa,” said Dr Zarir Udawadia, pulmonologist at P D Hinduja Hospital and Medical Research Centre, Mumbai, who is also among the key authors of the series.

App-based HIV self-testing programmes have already shown great promise, and their potential could be expanded to include tuberculosis testing, Dr Madhukar Pai, professor at McGill International TB Centre, McGill University, Canada, said.

“Almost one in three (around 3 million) people with active tuberculosis, even in the pre-Covid-19 era, remained undiagnosed or unreported globally. These individuals act as a potential reservoir for transmission. The majority of these so-called missing individuals often reside in peri-urban informal settlements of large cities in Africa and Asia. We need to take tuberculosis testing closer to where people live and work. Active case-finding strategies have always had important implications for tuberculosis prevention and reduced amplification of the epidemic even before the advent of Covid-19,” said Prof Keertan Dheda, head of the University of Cape Town's Division of Pulmonology in South Africa.

According to the report, Covid-19 has set tuberculosis control efforts back by about a decade. “Compared with 2019, tuberculosis case detection in 2020 was reduced by 18 per cent globally (a decrease from 7.1 million to 5.8 million cases) and by around 24 per cent in the ten worst-affected countries with high tuberculosis burden. India, Indonesia, the Philippines, and China account for 1.3 million cases (93 per cent) in the global decline in tuberculosis case detection. Major reductions in notified cases have been seen in the Philippines (37 per cent), Indonesia (31 per cent), South Africa (26 per cent), and India (25 per cent),” it said.

“In 2020, the number of tuberculosis cases from India notified to the World Health Organisation (WHO) was 16,29,301, a reduction of 25.1 per cent from the 2019 number (21,76,677). At least 30 million people have developed Covid-19 in India, and a devastating second wave has left many individuals with severe acute respiratory distress syndrome, a proportion of whom might develop post-Covid fibrotic sequelae. India also has the largest number of people living with chronic fibrotic lung scarring caused by tuberculosis. Post-Covid sequelae superimposed on post-tuberculosis fibrosis are likely to result in considerable disability in many of these individuals. New strategies involving triage tools and

innovative active case-finding interventions require an urgent implementation to reverse these alarming trends,” researchers said in the report.

The report also alluded to the Swiss cheese respiratory pandemic defence model created by virologist Ian Mackay.

“The model has several layers of Swiss cheese to illustrate the fact that a single layer of protection will not be enough to stop Covid-19. Because of the holes in each slice, the [coronavirus](#) will always get through; therefore, multiple layers of protection are needed to halt the pandemic. We need a similar, comprehensive approach for tuberculosis, captured in the tuberculosis Swiss cheese model, with three broad levels: societal, personal, and person-centric health-care,” researchers said.



Too early to do away with face masks, but onus on public: Experts

The Maharashtra and Delhi governments recently decided to ease the restriction on the compulsory wearing of face masks in public, a norm that was in place for two years and its violation attracted a fine of Rs 2,000

By: [PTI](#) | New Delhi |
April 1, 2022 4:30:10 pm

Even though some states have decided to stop penalising people for not [wearing masks](#) as [COVID-19](#) cases continue to drop, healthcare experts are of the opinion that it is too early to completely do away with the restriction.

They have advised people to voluntarily mask up in order to also stay protected from infections such as [influenza](#) and swine flu, apart from [coronavirus](#).

The Maharashtra and Delhi governments recently decided to ease the restriction on the compulsory wearing of [face masks](#) in public, a norm that was in place for two years and its violation attracted a fine of Rs 2,000.

Reacting to the development, renowned virologist T Jacob John said since the [pandemic](#) is “over” in India, the use of masks is no longer needed to reduce the SARS-CoV-2 transmission. The mask mandate has lived its time and there is no longer justification for its continuation as a “mandate”.

But it is a good idea to promote the voluntary wearing of masks in public places to reduce inhalation of dust and other respiratory transmitted agents, including TB bacilli, flu virus, other respiratory viruses like a syncytial virus, adenovirus, [common cold viruses](#) etc, he said.

“It is a habit that will reduce diseases. Currently, we see kidney transplant patients wearing masks; everyone will benefit — in buses, trains, aeroplanes etc,” John, the former director of the Indian Council for Medical Research's Centre of Advanced Research in Virology, told *PTI*.

“My personal opinion is that there ought to be an active promotion of mask-wearing in all hospital premises, in outpatient clinics and all queues and waiting areas. There I am not averse to even a mandate. For staff and patients, relatives, visitors etc,” John added.

Dr Ravi Shekhar Jha, Additional Director and Head of the Department – Pulmonology, Fortis Escorts Hospital, Faridabad, said masks should continue to be mandatory and it is premature to give up this habit completely.

“The [disastrous second wave](#), that took many young lives across the world, was something that the modern world had not seen before. People had become a little complacent after the first wave and that probably lead to an unchecked rise in fatal cases. Though it is true that the majority

of susceptible Indians are vaccinated, what we must keep in mind is that vaccine doesn't protect us against infection. Even if the infection is not fatal, it keeps you weak for many months," he said.



Another important consideration here is that though COVID-19 has probably weakened, the country saw a reduction in the number of swine flu cases due to masks and sanitation practices. (Source: Getty Images/Thinkstock)

"We all know about the [long Covid](#). Therefore, it is best to not get infected. So far, science has proved that masks are the only major contributors to preventing infection," Jha told PTI.

Another important consideration here is that though [COVID-19](#) has probably weakened, the country saw a reduction in the number of swine flu cases due to masks and sanitation practices.

"Swine flu is more fatal than Covid and the combination called [flurona](#) can also be prevented by this. Therefore, in my opinion, masks must not be taken out of fashion...too early," he noted.

Dr Akshay Budhraj, senior pulmonologist, Aakash Healthcare Super Speciality Hospital, said it is time to stop swinging between restriction and normalcy. We must learn to live with coronavirus the same way we live with other viruses such as influenza and adenovirus among others.

"Masks should not be mandatory for the general population, but recommended for those who are sick or who have any kind of immunosuppressive illness, visiting crowded closed places with poor

ventilation or when visiting a healthcare facility like hospitals or clinics," he said.

"At the same time, we need to stay cautious and follow the latest recommendations which may change from time to time in the coming months, as per the statistics. Now that everyone is aware enough of when to wear a mask, we must take responsibility ourselves in coming times," he said.

Dr Arunesh Kumar, HOD & Senior Consultant, Pulmonology, Paras Hospitals, Gurugram, said there has been a rise in [COVID-19](#) cases in the west as well as in China.

"Masking is the second-most effective intervention after vaccination when it comes to preventing new COVID infection. We are still not there with our double vaccine recipient numbers where [herd immunity](#) will be attained. New infections invite virus mutation. With a population as large as ours, it may prove a costly move as people will definitely find a reason not to put a mask on as a major deterrent has been removed," he said.

Advocating for unlocking but not unmasking, Kumar said the mask has also proved useful in preventing other infections like [tuberculosis](#) as well as allergic problems from dust and pollen, "which is a big problem in Delhi-National Capital Region".

"I urge people to consider masking up on a voluntary basis when out and about to help the country fight Covid infection effectively," he added.

2,448 tuberculosis cases detected this year in Chennai

Omjasvin M D / TNN / Apr 8, 2022, 19:13 IST



CHENNAI: A total of 2,448 people were diagnosed with tuberculosis by the Chennai Corporation from January to March 22 this year. According to the policy note from the municipal administration and water supply department, 13,172 TB cases were notified in 2021. The corporation is working towards eliminating TB by the deadline of 2025. Presently, the civic body has 36 TB Units, 162 designated microscopy centres, 13 CBNAAT and 13 Truenaat sites. The corporation offers free diagnosis and treatment in these centres.



Doctors bust myths around tuberculosis

By – TNN | [Dharitri Ganguly](#)
Created: Mar 26, 2022, 22:34 IST

Tuberculosis (TB) is still one of the deadliest diseases in India, and the country has seen a visible surge in the number of cases in recent times. Last year, the number of TB cases in India

has seen an almost 19 per cent rise over 2020, as per the annual TB report released by Union health minister Mansukh Mandaviya.



What more does the report suggest?

The total number of new and relapsed TB patients notified in India during 2021 were 19,33,381 as against 16,28,161 in 2020, the report suggested.

Despite the brief decline in TB notifications as seen during the months corresponding to the two major COVID waves in India, the National Tuberculosis Elimination Programme (NTEP) reclaimed these numbers, the report stated. "There has been a slight increase in the mortality rate due to all forms of TB between 2019 and 2020 by 11 per cent in the country," the report said.

What experts have to say

Doctors suggest that when a patient is diagnosed with [tuberculosis](#), not just do they require care and nutritious food, they should also be kept away from unsolicited advice and myths. Here they bust a few myths around TB.

Dr. Arvind Kate, Pulmonologist, shares facts around very commonly known myths.

Myth: Smoking is the potential cause of TB

Fact: One of the main causes of TB is when one tends to breathe infected air. Smoking decreases

lung defences and can make a person vulnerable to TB when his immunity gets compromised.

Myth: If a person doesn't exhibit any symptoms of TB then he/she may not be suffering from the disease

Fact: One can be infected with the TB bacteria for weeks without even knowing or having any side effects or complications. Basically, anyone with a weaker immune system will be susceptible to this disease.

Myth: Once the patient is recovered from TB, he/she will not suffer from it again

Fact: Even if you are cured of TB, it is possible that you can get the infection for the second time. It will be imperative for the patient to complete the entire course of treatment after being diagnosed with TB.

Dr. Sangita Chekker, Consultant Chest Physician, shares her opinions on the same

Myth: TB is hereditary

Fact: TB disease is not hereditary as genetics don't play any vital role in the transmission or the development of the disease. TB bacteria will take some time to develop in one's body. One can get TB if he/she is around someone who is already infected with the disease.

Myth: TB is mainly seen in underprivileged people

Fact: That is completely a false statement. TB doesn't differentiate between rich and poor. It can happen to anyone irrespective of age or gender.

Regenerative medicine researcher Dr Pradeep Mahajan says "TB is the 13th leading cause of death and the second leading infectious killer after COVID-19, globally. In earlier days, lack of awareness, hygiene, and proper treatment were the main causes of progressing illness, wherein a

patient with TB would develop extreme cough, lung infection, and extreme weight loss, and ultimately die.

"The challenge in managing TB lies in early detection and complete treatment. It is important to get early symptoms checked and complete the entire course of treatment (that lasts for up to a year) to achieve complete eradication of the bacteria. TB is deadly, but negligence and non-compliance is deadlier."



TB-HIV co-infection in state at 96% in 2021

PUNE In the year 2020, the percentage of TB and HIV co-infection was reported to be as high as 95%

Published on Apr 10, 2022 11:00 PM IST
BySteffy Thevar

PUNE In the year 2020, the percentage of TB and HIV co-infection was reported to be as high as 95%. In 2021, it rose to 96% and has been rising year-on-year in the state. Those with HIV have a compromised immunity which makes them even more susceptible to TB. Tuberculosis is a serious health threat, especially for people living with HIV. People living with HIV are more likely than others to contract TB.

As per the state health department, the state in 2021 reported over 1.96 lakh TB patients out of which 1.90 lakh (96%) were reported to have human immunodeficiency virus (HIV). In 2020, 95% of TB patients were reported to have HIV. About five years ago, this number stood at 67% while in 2019, it stood at 58% which was the lowest in the last five years. HIV weakens the immune system, increasing the risk of TB in people with HIV. Infection with both HIV and TB is called HIV/TB co-infection. Untreated latent TB infection is more

likely to advance to TB disease in people with HIV than in people without HIV. Latent TB is when the person is asymptomatic but is likely to spread the infection to others and with HIV, is likely to get infected with TB, MDR or even XDR. Dr Madhav Kankavale, Pune civil surgeon at Aundh district chest hospital, said, "Those with HIV are more likely to be infected with TB bacteria and this will further weaken their immune system. With such compromised immunity, the patient's treatment is prolonged even further. India is the highest contributor of TB in the world and with such co-morbidities among TB patients, the death rate due to the co-infection could go even higher."



Counselling helps TB patients take medicines

TB is a serious infectious disease caused by mycobacterium tuberculosis, which commonly affects the lungs



Sharmila Rajbhar (in white) with patient support supervisor Santosh Jha at the MSF Clinic in Govandi (Ht Photo)

Published on Apr 09, 2022 11:16 PM IST
[Jyoti Shelar](#)

Mumbai: In 2020, when Sharmila Rajbhar (36) was referred to the Médecins Sans Frontières (MSF) clinic in Govandi, she was unwilling to continue the treatment for her extensively drug-resistant

Tuberculosis (referred to as XDR-TB), which she had been taking since 2016. She was exhausted from the side effects of the medicines and she feared burdening her husband, who had recently recovered from multidrug-resistant TB and returned to his courier delivery job. However, 18 months down the line, Rajbhar hasn't missed even a single day of her medicines.

"I just want to get well so that I can go back to work," the Bhandup resident and mother of a four-year-old, said.

Patients like Rajbhar who suffer from drug-resistant TB hang by a thin thread, always on the verge of giving up medicines, thus making drug compliance a challenge for medical professionals. Typically, drug resistant TB medication includes several pills and has toxic side effects. In addition to the prolonged treatment, the loss of income which is often a result of their ill-health demotivates them from continuing their medication. Healthcare workers including chest physicians, counsellors and patient support supervisors use a range of interventions to motivate and ensure that patients stick to the regimen to cope with the disease. The MSF patient support supervisor Santosh Jha, for instance, heard Rajbhar's concerns and involved her husband in counselling sessions. "Building compliance depends on multiple factors: the way healthcare workers communicate with patients, building their trust and offering support that they may be lacking," said Jha, who has been working with the MSF clinic for the past 10 years.

TB is a serious infectious disease caused by mycobacterium tuberculosis, which commonly affects the lungs. The infection that responds to the first line of TB medications is referred to as drug-sensitive TB. However, when the bacteria become resistant to some of the drugs, it is referred to as multi drug-resistant TB (MDR-TB). When they become resistant to most available TB drugs, the infection is XDR-TB. In Rajbhar's case for instance, she was first detected with TB in 2005 and had

been on medication. Eventually, she developed XDR-TB, as the bacteria became resistant to most of the drugs available for treatment.

Before the pandemic, Maharashtra recorded 20,000 new TB cases every month. Nearly 22% of these cases are from Mumbai. In Mumbai, 54,983 new cases of TB were diagnosed on average annually between 2018 and 2021. This included 5,385 MDR-TB cases and 439 XDR TB cases annually. The “lost to follow-up” rate hovered between 5% and 7% annually.

The independent clinic is located in M-East ward. According to the civic body, M-East ward has nearly 2,800 patients on active treatment for drug resistant TB, making it the biggest such cluster in Mumbai. The clinic offers individualised treatment, psychosocial support, and integrated psychiatric care under one roof. The clinic handles some of the most complex drug-resistant cases and has initiated treatment for over 750 patients since 2012, most of them with the two newest anti-TB drugs bedaquiline and delamanid.

The clinic implements multiple methods to improve medication compliance. “We start with understanding what the patient’s support system is like and accordingly plan our interventions. Commonly, patients who lack family support are more likely to drop out mid-way. Other aspects like income loss, inability to carry on with household work and illness of other family members also play a role,” said Jha adding that some patients are then offered travel and nutritional support as well.

“We try to connect the benefits of the treatment with the patient’s short term and long-term life goals, and make them aware about the improvements in their health due to the compliance,” he said.

The treatment of drug-resistant TB goes on for 18 to 24 months. The excessive pill burden and their toxic side effects including nausea, skin rashes, ulcers, hearing loss, and vision impairment are

among the prime reasons for patients dropping out of treatment.

“Even in a simple case of diarrhoea, when a patient may be prescribed with a medicine course of five days, one tends to abruptly stop the medicines. Imagine a drug-resistant TB patient having to consume 13 or more pills in a day. They are bound to falter easily,” said Dr Vikas Oswal, a chest physician from Shatabdi Hospital in Govandi who believes that the aspect of counselling is crucial in drug compliance.

The MSF has collaborated with the civic body and replicated their independent clinic model in the Shatabdi Hospital as well. Activists say that all civic-run clinics too should offer similar comprehensive care to increase drug compliance.

“Some of the clinics don’t even have a counsellor attached to the TB outpatient department,” said patient-activist Ganesh Acharya. “The approach is too medicalised, largely hinging on drugs and tests. While these are important factors, TB care needs much more to ensure that the patient continues taking the drugs and undergoes regular tests,” said Acharya.

Patients in Mumbai get ₹500 as a direct benefit transfer (DBT) for their nutritional support. “It is a very small amount to afford a proper nutritional diet of eggs, chicken, milk and other things that the doctors recommend,” said Shehnaz Khan (26), a resident of Shivaji Nagar. Khan has been on XDR TB treatment at MSF’s independent clinic for the past 16 months. “But I am determined to fight the disease to look after my child,” said the mother of a four-year-old.

A civic official said that an all-around approach, which includes medical, nutritional and psychological support definitely improved adherence to treatment. “Many nutritional and other supportive interventions are undertaken in the city,” the official said.

Ending TB by 2025 needs more clinical research on drug resistance

Dr Lorenzo Guglielmetti is a doctor and the Médecins Sans Frontières director of the international endTB project. Dr Vijay Chavan is a chest specialist at the MSF TB Clinic in Mumbai.

A few weeks after the initial diagnosis of TB, more bad news awaited Zainab. Microbiological tests showed that the TB bacteria were resistant to all four usual TB drugs and to some of the drugs used to treat drug-resistant tuberculosis (DR-TB).

Published on Apr 02, 2022 03:27 PM IST

ByHindustan Times

Zainab, a child living in Mumbai, was two years old when she stopped gaining weight and started having fevers. Her mother immediately suspected tuberculosis (TB). Before she was born, Zainab's grandfather struggled for many months with this deadly disease. For the mother, Zainab's diagnosis was a long and tedious journey. To confirm that her daughter was sick with TB, she had to take her through seven different clinics and two tertiary care hospitals. A few weeks after the initial diagnosis of TB, more bad news awaited Zainab. Microbiological tests showed that the TB bacteria were resistant to all four usual TB drugs and to some of the drugs used to treat drug-resistant tuberculosis (DR-TB).

Globally, TB is the leading killer among infectious diseases. According to the Global TB report by the World Health Organization (WHO), after years of slow decrease, in 2020 the world has seen for the first time a significant rise in the total number of TB-related deaths. One third of these deaths occurred in India. Drug resistance is a concerning

pandemic within the TB pandemic, affecting at least 50,000 patients in India every year.

India is aiming to be 'TB Free' by 2025, five years before the target set by United Nations Sustainable Development Goals. This ambitious strategy entails a comprehensive, patient-centered approach that includes optimized diagnosis, partnership with the private care sector and support for individual patients during their treatment journey. However, with a steady count of complex DR-TB cases, are we actually close to achieving it?

DR-TB is difficult to treat and requires long, toxic regimens that are not adapted to those who need them most, like children. Research on DR-TB treatment must provide patients with treatment that includes shorter, well-tolerated combination of drugs that are adapted for administration to both adults and children. Clinical research is key to improve the current situation and progress towards TB elimination in India and in the world.

Overall, it had taken more than six months to diagnose Zainab with DR-TB, a long delay during which the disease continued to progress. In such cases, a long treatment of almost two years is required. Going through this means thousands of pills, sometimes-painful daily injections, and frequent, potentially irreversible side effects. Treatment success rates for DR-TB in India are low with only half of the patients successfully cured at the end of treatment. Possible reasons for this include the challenges of implementing a TB programme in a vast country with unequal health care delivery systems, high prevalence settings with migratory population, stigmatization of TB patients, and interruptions in drug supply.

According to the WHO, TB affects around one million children each year, with almost one out of four dying of this disease. The diagnosis of TB in children is much more challenging than in adults due to more insidious disease presentation and diagnostic tests, which are less reliable for children.

Mortality rates are higher, in particular for children of five years of age or less. Globally, approximately one quarter of a million of children die of TB every year.

Yet, historically, TB research and national TB programmes have neglected children, as this group contributed less to transmission of the disease in the community. DR-TB treatment is not adapted to children as drugs are developed for adult population and child-friendly options are lacking. Most often, children have to take adult tablets, which must be crushed in an attempt to produce the right dosage. This increases the risk of toxicity and lower efficacy.

Zainab began her treatment on a regimen including many oral drugs and daily injectables, which was painful and very difficult to administer. During an initial hospitalization to start the treatment, Zainab had already started showing behavioural changes such as crying spells and aggressiveness towards her family. Her mother was distraught at the scenario unfolding with painful treatment for her young child and despair and helplessness regarding her future. She was finally referred to the Doctors Without Borders/Médecins Sans Frontières (MSF) clinic in Mumbai, where she was treated with the new drug delamanid formulated for children, along with other drugs.

The injections have now stopped for Zainab. Ten months after starting treatment, she has now gained weight and is healthy. She even reminds her mother herself about taking the needed medications. Today, Zainab is playful and interacts with all the staff at the clinic. For the first time, her mother is hopeful for her child's recovery from the disease.

According to Dr Nidhin Joseph, an MSF TB physician, "Innovations in terms of newer drugs, newer shorter regimens which are easy for the patient to adhere to is the way forward. Research in this aspect will lead to robust scientific evidence

for better and more palatable treatment." Improved treatment regimens would represent a precious tool in the fight against TB, and a necessary complement to reach TB control goals in India and globally. To ameliorate current treatment, data of high quality is needed, which can only come from specific types of studies that rigorously compare new treatment regimens with the current standard of care (randomized controlled clinical trials).

Recognizing the need of efforts and investments for TB research, MSF, in collaboration with Indian Council of Medical Research - National AIDS Research Institute (ICMR-NARI), is running two clinical trials in Maharashtra, as part of the multi-country "endTB" project. These trials test combinations of newer, potent drugs, bedaquiline and delamanid, with other anti-TB drugs, aiming at shortening treatment to six to nine months and improving treatment success rates for DR-TB patients.

For India to advance towards the "TB Free" goal by 2025, we need broad collaborations between non-governmental organizations, national TB programmes, and civil society to foster research and innovation to revolutionize treatment for communities affected by DR-TB. Clinical research on DR-TB is key to developing optimized treatment options for everyone, including children like Zainab. Ultimately, an all-oral, less toxic, shorter treatment would mean better access for everyone.

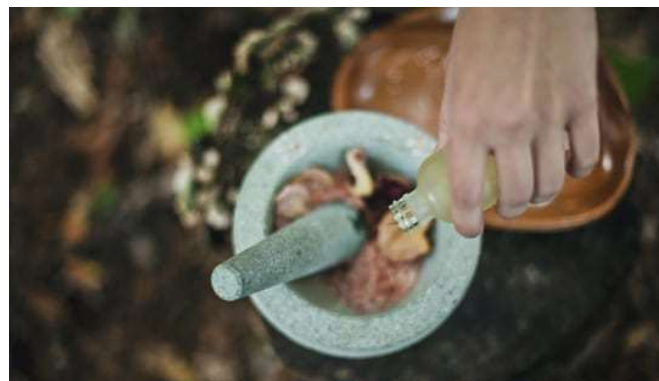
(Dr Lorenzo Guglielmetti is a doctor and the Médecins Sans Frontières director of the international endTB project. Dr Vijay Chavan is a chest specialist at the MSF TB Clinic in Mumbai.)

Tuberculosis: Fruitful naturopathy, diet therapy tips by doctors for TB patients

A person with tuberculosis may have a poor appetite due to the disease itself and side effects of the medications. Here are some naturopathy and diet therapy tips by doctors that can be fruitful for patients suffering from TB

Updated on Mar 30, 2022 06:04 PM IST
ByZarafshan Shiraz, Delhi

[Tuberculosis](#) is caused by the bacteria *Mycobacterium tuberculosis* that most often affect the lungs and despite the availability of an antibiotic regimen, TB has been an India-specific burden, given to our huge below-the-poverty-line population, which raises an increasing need to find [adjuvant therapies and herbal remedies](#) that can aid patient recovery and contain the toxic effects of chemical-based drugs. According to Dr R Lakshmi Priya, Consultant Microbiologist at Metropolis Healthcare Ltd., a person with tuberculosis may have a poor appetite due to disease itself and side effects of the medications. In an interview with HT Lifestyle, she advised, "They should have a healthy balanced diet by having the right amount of macro and micronutrients. Foods rich in protein like meat, milk, and milk products, fish, and eggs are recommended. Protein-rich drinks are advised for patients with low appetite. For vegetarians, cereals and pulses will provide the required nutrients. Groundnuts are equivalent in nutritional terms to more expensive nuts like almond and cashew. It is advised to restrict alcohol, carbonated drinks, tobacco, excess tea and coffee."



Tuberculosis: Fruitful naturopathy, diet therapy tips by doctors for TB patients (Photo by Katherine Hanlon on Unsplash)

As diet is concerned among TB patients, Dr Ankit Singhal, Pulmonologist at New Delhi's Sri Balaji Action Medical Hospital, added some more health tips that include:

1. Eat food rich in Vitamin B and Iron such as whole grain dark leafy greens such as spinach. Eat Antioxidants rich fruits (Blue-berries) and vegetables (tomato, bell pepper). Avoid fried foods such as white breads, parathas and sugar. Eat fewer red meats and more lean meats, soya beans and cold water fish for protein.
2. Use healthy cooking oil such as olive oil. Avoid eating baked foods such as cookies, donuts, French fries as it contains trans-fat. Avoid coffee and other stimulants like alcohol and tobacco. You can have medicine containing mixtures of multivitamins including B-complex, Vitamin-C and Vitamin-D.
3. Alternative therapies available eating herbs – aged garlic, Astragalus Rhodiola. Homeopathy - Arsenicum pithum for cough and chest pain and calcarea carbonica for chills, perspiration drowsiness and swollen lymph nodes. Acupuncture also helps in boosting the immune system.

Dr Babina NM, Chief Medical Officer at Jindal Naturecure Institute (Naturopathy for TB), asserted, "Naturopathy believes that a person is born healthy and strong and that they can stay that

way by living in accordance with the laws of nature. A proper diet, fresh air, exercise, sunshine, meditation and the right mental attitude, all play their part in keeping the body and mind fit." She suggested:

1. Foods rich in zinc: Sunflower seeds, nuts, chia seeds, pumpkin seeds and flaxseeds are great sources of zinc. They provide the body with large amounts of nutrients to fight against diseases like [TB](#).

2. Garlic: Garlic contains a compound known as Allicin, which is active against the bacteria that cause TB. Studies have proven that garlic extract can help contain multi-drug resistant TB, which is an important concern in developing countries.

3. Black pepper: Crushed black pepper can help in treatment of TB. Its anti-inflammatory properties clear the lungs and reduce discomfort and pain.

4. Mint: Mint assists in clearing the respiratory tract, ensuring the free passage of air. It is also rich in antioxidants and immunity-boosting components that protect the body from the risk of infections."

Given that a majority of TB patients experience loss in appetite, Dr Deepak Mittal, Founder of Divine Soul Yoga, recommended, "It is important for such patients to indulge in protein-rich foods like paneer, soya chunks and tofu. On top of that, the body can easily absorb such foods and give a person the required energy. Vitamins including A, C, E and D are crucial for a healthy immune system. Vitamins A, C and E are antioxidants that can destroy free radicals and protect the body from chronic diseases."

He added, "Also, vitamin D plays an important role in regulating the immune system and TB patients who are unable to get ample vitamins from a healthy diet may benefit substantially from taking a multivitamin supplement. Foods rich in vitamins include carrot, orange, papaya, guava, amla, soy, sweet lime, nuts and mushroom. Vitamin D helps TB patients build a stronger

immune system to respond effectively against anti-TB drugs."



Tuberculosis: Medicinal and alternative therapies to treat TB

With emergence of multi-drug-resistant TB, an increasing need has been felt to find adjuvant therapies and herbal remedies that can aid patient recovery and contain the toxic effects of chemical-based drugs. Doctors believe practicing specific alternative therapies can help treat tuberculosis

Updated on Mar 28, 2022 05:22 PM IST
By Zarafshan Shiraz, Delhi

According to the World [Health](#) Organization, [tuberculosis](#) or TB remains one of the world's deadliest infectious killers as each day, over 4,100 people lose their lives to it and close to 28,000 people fall ill with this preventable and curable disease. It is the 13th leading cause of death and the second leading infectious killer after Covid-19 (above HIV/AIDS) and is caused by bacteria (*Mycobacterium tuberculosis*) that most often affect the lungs.



Tuberculosis: Medicinal and alternative therapies to treat TB (Photo by Towfiq barbhuiya on Unsplash)

About one-quarter of the world's population has a TB infection, which means people have been infected by TB bacteria but are not (yet) ill with the disease and cannot transmit it. In an interview with HT Lifestyle, Dr Rohini Kelkar, Senior Consultant – Infectious Diseases and Clinical Microbiology at Metropolis Healthcare Ltd. revealed, "Since the discovery of Streptomycin, in 1943 for the treatment of tuberculosis, several new drugs have been added to the medicinal armamentarium. The philosophy and science for better patient outcomes is based on early diagnosis and accurate identification of the drugs that are most effective for individual patients."

She added, "This is achieved through conventional culture techniques and drug susceptibility tests which are time-consuming; or sophisticated molecular and rapid laboratory tests that identify the genes/mutations that contribute to drug resistance. Multi-drug therapy based on laboratory results of "next-generation sequencing" with standard protocols and drug dosages, under the supervision of medical specialists, is the best way forward to support the "End TB campaign"."

Dr Deepak Mittal, Founder of Divine Soul Yoga, shared, "Despite the availability of an antibiotic regimen, TB has been an India-specific burden due to our huge below-the-poverty-line population. With the emergence of multi-drug-resistant TB, an increasing need has been felt to find adjuvant therapies and herbal remedies that can aid patient recovery and contain the toxic effects of chemical-based drugs. Therefore, by investing time in practicing specific alternative therapies and thus in a healthy lifestyle, it can be more easily avoided than it can be treated."

Medicinal and alternative therapies to treat TB:

Asserting that it is only through a strong immune system that one can avoid getting sick even if the body harbours the TB bacteria, Dr Deepak Mittal said, "People with a weak immune system are at

increased risk of getting infected with TB. The alternative therapies like Yoga, Meditation, Pranayama, healthy diet play an important role in boosting immunity and strengthening the body and defences against viruses and bacteria and act as a preventive bulwark against Tuberculosis. These practices clear the respiratory passages, minimising risks of infections and allergies in the respiratory system which improves the lung function."

According to him, alternative therapy cannot cure TB but it can definitely prevent it. He stressed, "With preventative treatments and AYUSH protocols integrated, hopefully, the overburdened Indian health care system can breathe a sigh of relief. There is a need for more awareness, training as well as cross talks between modern medical clinicians and alternative medicine practitioners. The situation also needs reforms in medical education and regulation."

Referring to a study published in Respiriology, Dr Babina NM, Chief Medical Officer at Jindal Naturecure Institute, shared, "Yoga has a complementary role in TB management. It combats the disease by opening-up the chest and maximizing the intake of oxygen through deep inhalation. The ancient practice also supports and strengthens the immune system, besides reducing stress, a major reason for a weak immune system. While there are various medications and treatments available for tuberculosis, the cogency of such treatments can be enhanced to a great extent by the use of yoga and naturopathy."

She highlighted that unfortunately, drug resistance is intensifying in people each passing day and that there is an urgent need to start capitalising on the best therapies from all orientations to combat tuberculosis in a robust way. Dr Babina NM advised, "Some of the yogic poses to practice for those suffering from tuberculosis are: Kapalbhati Pranayama, Trikonasana, Bhujangasana. These asanas

improve the function of the immune system and strengthen liver function. In addition to all this, a proper diet, fresh air, exercise, sunshine and the right mental attitude, all play their part in keeping the body and mind fit. Sunflower seeds, nuts, chia seeds, pumpkin seeds and flaxseeds are great sources of zinc. They provide the body with large amounts of nutrients to fight against diseases like TB. Crushed black pepper, mint, garlic can help in the treatment of TB."



ரூ.70 கோடி செலவில் 389 நடமாடும் மருத்துவமனைகள்: முதல்வர் ஸ்டாலின் தொடங்கி வைத்தார்

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சென்னை: மருத்துவம் மற்றும் மக்கள் நல்வாழ்வுத் துறை சார்பில் 70 கோடி ரூபாய் செலவில் புதிதாக 389 நடமாடும் மருத்துவமனைகளின் சேவையை தொடங்கி வைக்கும் அடையாளமாக, 133 நடமாடும் மருத்துவமனைகளின் சேவையை தமிழக முதல்வர் மு.க.ஸ்டாலின் இன்று (ஏப்.8) கொடியசைத்து தொடங்கி வைத்தார்.

இதுதொடர்பாக தமிழக அரசு வெளியிட்டுள்ள செய்திக் குறிப்பில், "ஏழை எளிய மக்கள் பயன்பெறும் வகையில், தொலைதூரத்தில் உள்ள கிராமங்களுக்கு, மாதந்தோறும் குறிப்பிட்ட நாட்களில் அங்கேயே சென்று நோய்களைக் கண்டறிந்து, அதற்கான சிகிச்சை அளித்திட 2007-ஆம் ஆண்டு 100 மருத்துவ வாகனங்கள் வாங்கப்பட்டு, மறைந்த முதல்வர் கருணாநிதி ஆட்சிக் காலத்தில் 100 நடமாடும் மருத்துவக் குழுக்கள் அமைக்கப்பட்டது. மேலும், 2008-ஆம் ஆண்டு 285 நடமாடும் மருத்துவ வாகனங்கள் வாங்கப்பட்டு, மொத்தம் 385 நடமாடும் மருத்துவக் குழுக்கள் உருவாக்கப்பட்டன.

ஒரு மருத்துவக் குழுவில், ஒரு மருத்துவ அலுவலர், ஒரு செவிலியர், ஒரு ஓட்டுநர், ஒரு துப்புரவு பணியாளர் பணியமர்த்தப்பட்டு, தொலைதூர கிராமங்களில் வாழும் மக்களுக்கு அவர்களின்

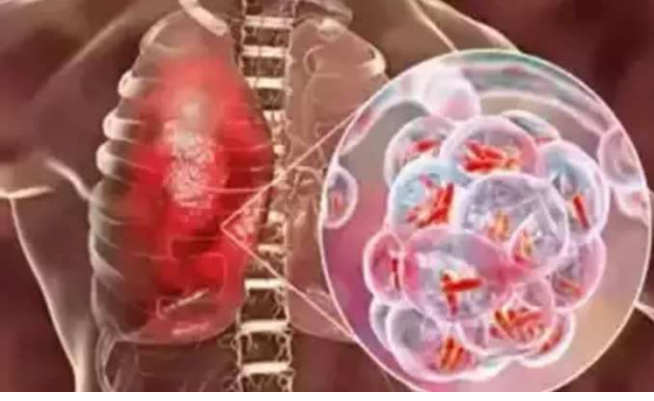
இருப்பிடத்திலேயே தேவையான மருத்துவ வசதி அளிக்கும் நோக்கில் 385 வட்டாரங்களிலும் நடமாடும் மருத்துவக்குழு வாகனங்கள் மூலம் முகாம்கள் நடத்தப்பட்டு வந்தன.

385 நடமாடும் மருத்துவக் குழு வாகனங்களை நடமாடும் மருத்துவமனைகளாக மேம்படுத்தி ஆய்வக நுட்புனர்களை நியமனம் செய்து ஆய்வக வசதிகளுடன் கிராமப்புற ஏழை எளிய மக்களுக்கு தரமான மருத்துவச் சேவைகள் வழங்கப்பட்டு வருகிறது.

சிறந்த தாய் சேய் நலன், காசநோய்க்கான சிகிச்சை, தொற்றா நோய்களுக்கான சிகிச்சை ஆகியவற்றில் சிறப்பு கவனம் செலுத்தி, ஒவ்வொரு ஊராட்சி ஒன்றியத்திலும், கிராமங்களுக்கும், குக்கிராமங்களுக்கும் வரையறுக்கப்பட்ட பயணத்திட்டத்தின்படி மருத்துவ சேவை அளிப்பதே நடமாடும் மருத்துவமனை திட்டத்தின் நோக்கமாகும். இத்திட்டத்தின் கீழ், ஒரு மாதத்திற்கு ஒரு வட்டாரத்தில் 40 முகாம்கள் நடத்தப்பட்டு வருவதோடு, அதிக தற்காலிக குடியிருப்புகள் நிறைந்த பகுதிகளுக்கு முக்கியத்துவம் கொடுக்கப்பட்டு, சர்க்கரை நோய் மற்றும் உயர் இரத்த அழுத்த நோய், காசநோய் உள்ளவர்களுக்கு ஒரு மாதத்திற்கான மருந்துகளும் வழங்கப்படுகிறது.

இந்நிலையில், 2021-2022ஆம் ஆண்டு மருத்துவம் மற்றும் மக்கள் நல்வாழ்வுத்துறை மானியக் கோரிக்கையில், "தொலைதூர கிராமங்களுக்கு மருத்துவ சேவையை வலுப்படுத்த புதிதாக 389 எண்ணிக்கையில் நடமாடும் மருத்துவக்குழு வாகனங்கள் ரூபாய் 70 கோடி மதிப்பீட்டில் வழங்கப்படும்" என்று அறிவிக்கப்பட்டது. அதனடிப்படையில் ஒரு வாகனத்திற்கு தலா ரூ.18 இலட்சம் செலவில் தமிழகத்தில் உள்ள 389 நடமாடும் மருத்துவ வாகனத்தை மாற்றுவதற்கு 70.02 கோடி ரூபாய் நிதி தேசிய நலவாழ்வு குழுமத்தால் ஒதுக்கீடு செய்யப்பட்டது. தமிழ்நாடு மருத்துவ சேவைகள் கழகத்தின் மூலம் புதிதாக வாங்கப்பட்ட 389 வாகனங்கள் மறுவடிவமைப்பு செய்யப்பட்டு, அதன் சேவையை தொடங்கி வைக்கும் அடையாளமாக, 133 நடமாடும் மருத்துவமனைகளின் சேவையை முதல்வர் ஸ்டாலின் தொடங்கி வைத்து, பார்வையிட்டார்.

இந்த நிகழ்ச்சியில், உயர்கல்வித் துறை அமைச்சர் க.பொன்முடி, மருத்துவம் மற்றும் மக்கள் நல்வாழ்வுத் துறை அமைச்சர் மா.சுப்பிரமணியன், இந்து சமயம் மற்றும் அறநிலையத் துறை அமைச்சர்



பி.கே.சேகர்பாபு, பெருநகர சென்னை மாநகராட்சி மேயர் ஆர்.பிரியா, சட்டமன்ற உறுப்பினர்கள் அதிகாரிகள் கலந்து கொண்டனர்.

THE TIMES OF INDIA
சமயம்

Tuberculosis in female: பெண்களுக்கு காசநோய் வந்தால் குழந்தை பிறப்பதில் சிக்கல் உண்டாகுமா? பெண்களோடு ஆண்களும் அறிவது அவசியம்!

S Dhanalakshmi | Samayam Tamil
Updated: 29 Mar 2022, 1:29 pm

பெண்களில் நுரையீரல் காசநோயின் மிகவும் பொதுவான தளம் பிறப்புறுப்பு காசநோய் ஆகும். பெண்களை பாதிக்கும் பிறப்புறுப்பு காசநோய் ஆனது ஃப்லோபியன் குழாய்கள், கருப்பை புறணி, கருப்பைகள், கருப்பை வாய் மற்றும் பிறப்புறுப்பு / ஆகியவற்றை பாதிக்கலாம். பெண்களுக்கு உண்டாகும் பிறப்புறுப்பு காசநோய் குறித்து இப்போது பார்க்கலாம்.

பெண் பிறப்புறுப்பு காசநோய் (Female genital tuberculosis (FGTB)) அறிகுறிகள், காரணங்கள் அதற்கான சிகிச்சைகள் முறைகள் என்னவென்பதை பார்க்கலாம்.

உலக மக்கள் தொகையில் நான்கில் ஒரு பகுதியினர் காசநோயால் பாதிக்கப்பட்டுள்ளனர். இதற்கு தடுப்பூசிகள் மற்றும் ஆண்டி பயாடிக் சிகிச்சை முறைகள் இருந்தாலும் இது ஒரு சுகாதார

பிரச்சனையாகவே

உள்ளது.

பொதுவாக காசநோய் நுரையீரலை பாதிக்கிறது. ஆனால் இது பரவி சிறுநீரகங்கள், இரைப்பை, குடல் மூளை மற்றும் இடுப்பு (பிறப்புறுப்பு) உறுப்புகளுக்கு இரண்டாம் தொற்று உண்டாக்கலாம். பெண்களில் நுரையீரல் காசநோயின் மிகவும் பொதுவான தளம் **பிறப்புறுப்பு காசநோய்** மற்றும் பெண் பிறப்புறுப்பு காசநோய் இது பெண்களின் ஃப்லோபியன் குழாய்கள், கருப்பை புறணி, கருப்பைகள், கருப்பை வாய் மற்றும் பிறப்புறுப்பு ஆகியவற்றை பாதிக்கலாம்.

பிறப்புறுப்பு காசநோய் எப்படி கருவுறாமை உண்டாக்குகிறது

பெண் பிறப்புறுப்பு காசநோய் மோசமானது. இது பெரும்பாலானா நோயாளிகளிடம் எந்த அறிகுறிகளையும் உண்டாக்கவில்லை. குறிப்பாக ஆரம்ப கட்டங்களில் என்று சொல்லலாம். இது கருவுறாமை தான் முதல் அறிகுறி என்று சொல்லலாம். ஆரம்ப கட்டத்தில் இதற்கு சிகிச்சையளிக்கப்படாவிட்டால், காசநோய் கருவுறாமைக்கு வழிவகுக்கும். ஃப்லோபியன் குழாய்களை கடுமையாக சரி செய்யமுடியாதபடி சேதப்படுத்த செய்யும்.

இது கருப்பையின் புறணியை சேதப்படுத்தும் மற்றும் கருப்பையில் ஓட்டுதல்களின் வளர்ச்சியை ஊக்குவிக்கும். சில நேரங்களில் கடுமையானதாகவும் இருக்கலாம். அண்டவிடுப்பின் மோசமான கருப்பை இருப்பு, கருமுட்டை, தரம், உள்வைக்கும் முறையில் தோல்வி, குறைந்த கர்ப்ப விகிதம் மற்றும் அதிக கருக்கலைப்பு விகிதம் ஆகியவற்றில் பிரச்சனையை உண்டு செய்யலாம்.

பிறப்புறுப்பு காசநோய் உள்ள பெண்களுக்கு மாதவிடாய் ஒழுங்கற்று இருப்பது, இரத்தக்கறையோடு பிறப்புறுப்பு வெளியேற்றம், உடலுறவின் போது வலி மற்றும் நாள்பட்ட இடுப்பு வலி போன்ற அறிகுறிகள் இருக்கலாம். சில நேரங்களில் இந்த நிலை கருப்பை நீர்க்கட்டிகள், எக்டோபிக் கர்ப்பம் அல்லது பிறப்புறுப்பு புற்றுநோய் போன்ற நோய் நிலைமைகளையும் இது பிரதிபலிக்கலாம்.

பிறப்புறுப்பு காசநோய் எப்படி கண்டறியப்படுகிறது?

நோய்த்தொற்றுக்கான மூன்றாவது பொதுவான தளமாக இது அறியப்படுகிறது. (நுரையீரல் மற்றும் நிணநீர் முனைகளுக்கு பிறகு) பிறப்புறுப்பு காசநோய் அடிக்கடி கண்டறியப்படாமல் இருக்கலாம். பல்வேறு சோதனைகள் இதற்கு இருந்தாலும் கூட நோயறிதல் இன்னும் சவாலாகவே உள்ளது.

மருத்துவ வரலாற்றின் அடிப்படையில் மருத்துவருக்கு சந்தேகம் இருந்தால் முழுமையான உடல் பரிசோதனை, இமேஜிங் முறைகளின் பயன்பாடு, அறுவை சிகிச்சை மற்றும் ஹிஸ்டோபாதாலஜி கண்டிபிடிப்புகள் பி.சி.ஆர் அல்லது மரபணு நிபுணர் போன்ற சோதனைகள் நோயறிதலுக்கு தேவை என்று அவர் எடுத்துரைத்தார்.

பெண் பிறப்புறுப்பு காசநோய் (Female genital tuberculosis (FGTB)) தொடர்புடைய குழாய் அடைப்பை ஹிஸ்டெரோசல்பிங்கோகிராம் மூலம் கண்டறியலாம். கருப்பை வாய் வழியாக ரேடியோ - ஒளிபுகா சாயம் கருப்பைக்குள் அனுப்பப்படுகிறது. பிறகு ஃபலோபியன் குழாய்கள் வழியாக இடுப்பு குழிக்குள் பரிசோதிக்கப்படுகிறது. மேலும் ஹெச்.எஸ்.ஜி குழாய்களின் அடைப்பு அல்லது ஒட்டுதல்களை குறிக்கும் கருப்பை குழி சுருக்கத்தையும் காண்பிக்கலாம். ஃபலோபியன் குழாயின் பாதையில் எங்கும் குழாய் அடைப்பு ஏற்படலாம். சில சமயங்களில் சேதமடைந்த குழாய்கள் முனையில் அடைப்பை உருவாக்கி குழாய் சிதையவும் வாய்ப்புண்டு.

பிறப்புறுப்பு காசநோய் தொற்று சிகிச்சை

காசநோய் நிபுணருடன் கலந்தாலோசித்து காசநோய் எதிர்ப்பு மருத்துவ சிகிச்சையை பரிந்துரைக்கலாம். இந்த சிகிச்சையானது 6 மாதங்கள் வரை நான்கு மருந்துகளை கொண்ட முறையாகும். முதல் வரிசை மருந்துகள் தோல்வியுற்றால் இரண்டாவது வரிசை சிகிச்சை ஏற்றுக்கொள்ளப்படுகிறது. இதில் அறுவை சிகிச்சையின் பங்கு குறைவாகவே உள்ளது. இடுப்பு வலி அல்லது அதிக இரத்தப்போக்கு உள்ள நோயாளிகளுக்கு இவை பரிந்துரைக்கப்படலாம்.

காசநோய் தொற்று கருவுறாமையான சிகிச்சை

பெரும்பாலும் பிறப்புறுப்பு காசநோயால் பாதிக்கப்பட்ட அனைத்து பெண்களிலும் ஃபலோபியன் குழாய்கள் பாதிக்கப்படுகின்றன.

அதே சமயம் பாதி பேரிடம் எண்டோமெட்ரியமும் பாதிப்பை பார்க்க முடிகிறது. தடுக்கப்பட்ட அல்லது சேதமடைந்த குழாய்களை கொண்ட பெண்களுக்கு இன் விட்ரோ கருத்தறித்தல் மற்றும் கரு பரிமாற்றம் (IVF-ET) தேர்வுக்கான சிகிச்சையாக உள்ளது. மெல்லிய கருப்பை புறணி உள்ள பெண்கள் தங்கள் ஜவிஎஃப் சுழற்சியை திட்டமிடுவதற்கு முன் ஹிஸ்டெரோஸ்கோபிக்கு உட்படுத்த வேண்டியிருக்கலாம்.

திரவத்தால் நிரப்பப்பட்டு சேதமடைந்த ஃபலோபியன் குழாய்கள் கொண்டுள்ள பெண்களில் ஜவிஎஃப் விகிதம் வெகுவாக குறைகிறது. இந்த பெண்களுக்கு ஜவிஎஃப் செய்வதற்கு முன்பு பாதிக்கப்பட்ட குழாய்களை அகற்றுதல் அல்லது கருப்பை சுவர் வழியாக வெளிவரும் போது அதை அகற்றுவதன் மூலம் ஹிஸ்டெரோஸ்கோபி பரிந்துரைக்கப்படுகிறது.

இந்த ஜவிஎஃப் உடன் கர்ப்ப விகிதங்கள் ஆனது நோயின் தீவிரம், எண்டோமெட்ரியல் லைனிங்கின் சேதத்தின் அளவு பெண்ணின் வயது, அவளது கருப்பை இருப்பு, உடன் இருக்கும் ஆண் காரணி மலட்டுத்தன்மை போன்ற பல காரணிகளை பொறுத்தது.

Continued from page no.1

டிபி மற்றும் காசநோய் குறித்த இந்த கட்டுரைகளை இனியும் நம்பாதீங்க...

எலும்புகளையும் பாதிக்கிறது. நீண்ட உண்ணாவிருத்தம், போதிய தூக்கம் இல்லாமை, மன அழுத்தம் மற்றும் ஒழுங்கற்ற உணவு பழக்கங்கள் ஆகியவை காசநோயை ஏற்படுத்துகின்றன.

இந்த நோயின் அறிகுறிகள் குறித்த விழிப்புணர்வு இல்லாத காரணத்தினாலும் நோயை தாமதமாக அறிவதாலும் பலருக்கு மருத்துவரிடம் வருவதற்கு முன்பே நோயின் அபாயம் அதிகமாகி விடுகிறது. இந்தியாவில் மிக நீண்ட காலமாக இருக்க கூடிய ஒரு நோயாக காசநோய் உள்ளது. நமது நாட்டில் மிகவும் தவறாக புரிந்துக்கொள்ளப்பட்ட ஒரு நோய் என காசநோயை கூறலாம்.

ஏனெனில் காசநோய் குறித்து மக்களிடம் பல தவறான கருத்துகள் உள்ளன. எனவே இதில் எவையெல்லாம் கட்டுகதை எவையெல்லாம் உண்மை என்பதை நாம் கண்டறிய வேண்டியது முக்கியமாகும்.

கட்டுகதை 01:

காசநோய் ஒருவருக்கு நுரையீரலில் மட்டுமே பாதிப்பை ஏற்படுத்துகிறது.

உண்மை: உண்மையில் காசநோய் பெரும்பாலும் முதலில் நுரையீரலையே தாக்குகிறது. ஆனால் தொடர்ச்சியாக சிறுநீரகம், மூளை மற்றும் முதுகெலும்பு போன்ற பிற உடல் பாகங்களிலும் இது பாதிப்பை ஏற்படுத்துகிறது. இதனால் ஏற்படும் அறிகுறிகளில் மாறுபாடுகள் இருக்கலாம். ஏனெனில் ஒவ்வொரு முறையும் காசநோய் வெவ்வேறு உறுப்புகளை தாக்குகிறது.

நுரையீரலுக்கு வெளியே ஏற்படும் காசநோயானது கூடுதல் நுரையீரல் காசநோய் எனப்படுகிறது. இப்படியான காசநோயால் பாதிக்கப்பட்டவர்கள் உடனே மருத்துவ சிகிச்சை எடுத்துக்கொள்ள வேண்டும். அவருக்கு சிகிச்சையளிக்கப்படாமல் இருந்தால் அது நுரையீரலையும் பாதிக்கிறது. மேலும் இரத்த ஓட்டம் வழியாக இது மற்ற உடல் உறுப்புகளையும் பாதிக்கிறது.

கட்டுகதை 02:

காசநோய் ஒரு மரபணு நோய்

உண்மை: இந்த கூற்று மிகவும் தவறானது ஆகும். காசநோய் ஒரு பரம்பரை நோய் கிடையாது. காசநோய் மரபணுக்களில் பாதிப்பை ஏற்படுத்துவதில்லை. மரபணுக்களில் பாதிப்பை ஏற்படுத்தும் நோய்களே அடுத்த தலைமுறைக்கு கடத்தப்படுகிறது. காசநோய் யாருக்கு வேண்டுமானாலும் வரலாம். இது மைக்கோபாக்டீரியம் மற்றும் காசநோய் பாக்டீரியாவால் ஏற்படுகிறது. இந்த நோய்க்கு உடனடி சிகிச்சை தேவை.

கட்டுகதை 03:

புகை பிடிக்கும் பழக்கம் இல்லாதவர்களுக்கு காசநோய் வராது

உண்மை: புகைப்பிடிப்பது என்பது காசநோய்க்கான காரணி அல்ல. காசநோய்க்கு எச்.ஐ.வி, நீரிழிவு நோய் மற்றும் சிறுநீரக நோய் போன்ற சில நோய் காரணிகள் காரணமாக இருக்கலாம். மேலும் இது நுரையீரலை தவிர மூளை, மூட்டுகள், எலும்புகள், முதுகெலும்பு மற்றும் கண்கள் போன்ற பிற உறுப்புகளையும் பாதிக்கின்றன.

கட்டுகதை 04:

காசநோயை குணப்படுத்த முடியாது

உண்மை: முதலில் காசநோய்க்கு ஆரம்பகால நோயறிதல் முக்கியமாகும். ஒருவர் சரியான சமயத்தில் மருத்துவரை அணுகினால் காசநோயை எதிர்த்து அவர் போராட மருத்துவர் உதவி செய்ய முடியும். இதனால் காசநோயில் இருந்து குணமாக முடியும். தாமதமான காசநோயை சரி செய்வது என்பது கடினமான விஷயமே.

கட்டுகதை 05:

பேசிலஸ் கால்மெட்- குய்ரின் (பி.சி.ஜி) தடுப்பூசி எடுத்துக்கொள்வது காசநோயை தடுக்கிறது

உண்மை: பி.சி.ஜி தடுப்பூசியானது குழந்தைகளை கடுமையான காசநோயில் இருந்து பாதுக்காக்கிறது. ஆனால் இது பெரியவர்களை காசநோயில் இருந்து பாதுக்காக்குமா என இன்னமும் தெரியவில்லை.

கட்டுகதை 06:

நல்ல சுகாதாரமாக இருப்பவர்களுக்கு காசநோய் பாதிப்பு ஏற்படுவதில்லை

உண்மை: காசநோய் நமது நோய் எதிர்ப்பு சக்தி மற்றும் வேறு பல காரணங்களால் ஏற்படுகிறது. இதற்கும் சுகாதாரத்திற்கும் எந்த தொடர்பும் கிடையாது. இது யாரை வேண்டுமானாலும் பாதிக்கலாம்.

எனவே காசநோய் ஒரு மோசமான நோய் என்பதை இப்போது அனைவரும் அறிந்திருக்க கூடும். இந்த நோயை ஆரம்பத்திலேயே அறிவது மூலம் இதன் கடுமையான தாக்கத்தை தடுப்பதுடன் உடலில் காசநோய் இல்லாமல் செய்ய முடியும். எனவே மக்கள் அனைவரும் காசநோய் குறித்த அறியாமையில் இருந்து வெளி வருவதன் மூலம் இந்தியாவில் காசநோயின் பரவலை தடுக்க முடியும்.

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