

Review Article

Role of homoeopathy of AYUSH in tuberculosis

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ABSTRACT

The article deals with an age-old problem called Tuberculosis. In India, the condition is known as 'Kshaya' as the body gets wasted. Similarly, the programmatic portal to deal with the disease is called 'Nikshaya portal'. The disease is also associated with the partition of India. It is believed that if the TB condition of Jinnah was known to the congress leaders, they would have delayed the formation of partition and thus avoiding the horrors of partition. Raj Kapoor's movie 'Aah' showed him dying from TB as the world did not have any curative method by the time of release of the movie. One of the exponent of homoeopathy, Dr. E. A. Farrington who introduced the concept of comparative materia medica lost his life to TB at the age of 38 years. In 1994, the lead author had a young girl suffering from cough and the cough did not subside with the Homoeopathic medicines. Eventually, the case was referred and it turned out to be a case of pulmonary TB. Thus, the article sees the role of homoeopathy through the eyes of medical pluralism where homoeopathy has a specific and critical role in the entire gamut of TB. It suggests a treatment protocol as a complement to the existing therapeutics. It builds on the property of homoeopathy as essential medicine (EM) where it is cost effective, therapeutically effective while having no side effects. Using these three properties, mass coverage can be done through inclusion of Homoeopathy. The approach will surely lessen the TB burden of the nation.

Keywords: TB, Homoeopathy, Miasm, NTCP, RNTCP, NTEP, Materia medica

INTRODUCTION

On March 24, 1882, Dr. Robert Koch announced the discovery of *Mycobacterium tuberculosis*, the bacteria that cause tuberculosis (TB). During this time, TB killed one out of every seven people living in the United States and Europe. Dr. Koch's discovery was the most important step taken toward the control and elimination of this deadly disease. A century later, March 24 was designated world TB day as a day to educate the public about the impact of TB around the world.¹⁻⁷

Koch also contributed to the elucidation of infectious etiology of TB and for his scientific results, he was awarded the Nobel prize in medicine in 1905. This famous scientist was able to isolate the tubercle bacillus and presented his extraordinary result to the society of physiology in Berlin on 24th March 1882.¹⁻¹¹

There is a common thread between Koch and Dr. Hahnemann. Koch injected 0.25 cm³ concentrated tuberculin in his own arm and developed ague fever. Similarly, Hahnemann drank the boiled juice of Peruvian Cinchona bark and developed ague fever. The point to be noted is that Hahnemann did the experiment that discovered Homoeopathy in 1790 and Koch a century later in 1890.^{3,53,55}

Johann Schonlein coined the term "tuberculosis" in the 1834, though it is estimated that *Mycobacterium tuberculosis* may have been around as long as 3 million years.^{1,2,14}

Tuberculosis (TB) was called "phthisis" in ancient Greece, "Tabes" in ancient Rome, and "Schachepheth" in ancient Hebrew. In the 1700s, TB was called "the white plague" due to the paleness of the patients. TB was commonly called "consumption" in the 1800s even after Schonlein named it Tuberculosis. During this time, TB was also called the "captain of all these men of death."¹⁻³

During the middle ages, TB of the neck and lymph nodes was called "Scrofula." Scrofula was believed to be a different disease from TB in the lungs. During this period, the illness was known in England and France as king's evil and it was widely believed that persons affected could heal after a royal touch. The first written documents describing TB that dates back to 3300 and 2300 years ago were found in India and in China respectively.¹⁻⁸

In 1720, the infectious origin of TB was conjectured by the English physician Benjamin Marten, in his publication "a new theory of Consumption".¹⁻³

Similarly, during the industrial revolution, the diffusion of particularly problematic social conditions such as extremely deprived work settings, poorly ventilated and over-crowded housing, primitive sanitation, malnutrition and other risk factors were intimately associated with the disease.^{2,3,9}

LITERATURE REVIEW

Tuberculosis has been a permanent challenge over the course of human history because of its severe social implications.^{2,3}

There are some hypotheses regarding the disease of tuberculosis. It has been hypothesized that the *Mycobacterium* originated more than 150 million years ago.¹⁻³

More than a century before Koch, in 1865, the infectious nature of TB was demonstrated by Jean Antoine Villemin, a French military surgeon at the army medical school. He formulated his hypothesis observing that TB was more frequent among soldiers who stationed for long times in barracks than among those in the field. He also highlighted how healthy army recruits coming from the country side often became consumptive some months

after the beginning of their service. Villemin suggested that Pthisis could be similar to Glanders, an infectious disease in horses.^{3,9,12-15}

When mortality rates due to tuberculosis declined in the early and mid-19th century, the explanations were hypothetical. Improved social and living conditions, herd immunity resulting from natural selection of genetically more resistant population and improved nutrition were offered as hypotheses.^{2,3}

The first successful remedy against TB was the introduction of Sanatorium cure that was described for the first time in 1854 or in the late 19th and early 20th centuries. The concept was given by Herman Brehmer, a botany student suffering himself from TB who reported his healing after a travel to the Himalayan mountains. During the rest at sanatorium, the therapeutic approach provided was supplemented with pulmonary collapse procedures designed to rest infected parts of lungs and to close cavities. In 1793, the caseous necrosis (CN) or cheese like Pthisis abscesses were named ‘Tubercles’ by the Scottish pathologist Mathew Bacille.^{2,16}

In the decades following Koch’s discovery, the Clemens Freiherr Von Pirquet and Charles Montoux introduced the Tuberculin skin tests in 1907 and in 1910 they used the test to demonstrate latent tuberculosis in Asymptomatic children. Florence Seibert developed the purified protein derivative (PPD) in 1930s and this is the injected material in the tuberculin test. Following that, Albert Calmette and Camille Guérin developed the Bacillus Calmette Guérin (BCG) vaccine that was widely used following World War I. Public health measures picked up after the elucidation of bacterial cause of Tuberculosis. The modern era treatment of TB heralded with the discovery of Albert Schatz, Elizabeth Bugie and Selman Waksman’s Streptomycin in 1944. Other anti-tubercular drugs like PAS followed in 1946. Thiacetazone followed in 1950. Isoniazid, the first oral anti-tubercular drug in 1952 and Rifampicin were developed in 1957. Rifampicin followed in 1966.^{2,3,17-21}

In 1948, WHO undertook the first TB disease control program in Poland the effort was based on tuberculin testing followed by BCG vaccination of nonreactors. In 1974, the WHO expert committee in its 9th report advocated sputum microscopy of the symptomatic individuals and those at risk. It advocated ambulatory therapy and strongly recommended BCG vaccination.²²

As per a 2016 paper by NIRT, Bengaluru and CTD, under nutrition is an important risk factor for progression of latent TB infection to TB disease. It increases the risk of drug toxicity, TB relapse and mortality. The study further cites that for each unit of reduction in body mass index (BMI), the risk of TB increases by 14%. Undernourished patients also tend to have poor bioavailability of drugs such as ‘rifampicin’ leading to treatment failure and development of multi drug resistance (MDR).²³

In order to improve the nutritional status of TB patients, the Nikshay Poshan Yojana and Ni-Kshay Mitra launched in 2018 addresses the issue. It is a direct benefit transfer (DBT) scheme for nutritional support to TB patients. All notified TB cases are provided with a financial incentive of ₹500 per month. According to TB 2022 India Report, 7 million have benefited between 2018 and 2022 and 2,089 crores (one crore is equal to 10 millions) has been disbursed during this period.²⁴

As on march 9th 2023, 9.55 lakh or about 1 million TB patients across India adopted by Ni-Kshay Mitras are to receive nutritional support. In the RNTCP driven Stop TB Campaign, the slogan is TB Harega Desh Jitega (TB will lose and country will win). In this campaign, the strategy adopted is “acute case finding (ACF) where cases of cough having 15 days duration are identified and referred to TB centers for checkups. Another strategy to deal with drop out cases is the directly observed treatment short course (DOTS) strategy where the outreach worker ensures that the medicines are consumed in front of the TB worker. The strategy helps to link the patient to the continuous treatment plan and thus avoiding the case to become resistant.^{25,26}

CLINICAL FEATURES

The disease is called ‘Kshay’ (Consumption) as there is severe wastage of muscles. There is rise of body temperature in the evening, weight loss, cough and weakness. This is typical in case of pulmonary tuberculosis. TB can be extra pulmonary also. It can affect bronchus, skin, brain, intestine, bone, kidney as well.⁴⁻⁷

World health organization (WHO) has committed to eradicate TB by year 2050 as per the global tuberculosis report, 2016.²⁷

LINK TO HIV/AIDS

In Sub Saharan Africa, TB is fueled by AIDS and the TB continues to be unabated. TB is responsible for 1.4 million TB deaths among infectious diseases after HIV. The current TB-HIV epidemic associated with its severe social implications, treating and preventing TB have represented a permanent challenge over the course of human history.^{2,3,7-10,28}

In 2009, the national frame wok for joint TB/HIV collaboration was initiated. Prevalence of HIV in TB patients ranged from 1% to 14%. It was 30% higher in smear negative and extra pulmonary than in smear positive TB patients. TB/HIV collaboration started in 2001 in six states and eight additional states in 2004.²⁹

EVOLUTION OF TB PROGRAMS IN INDIA

In 1959, the government of India with the help of WHO established the national tuberculosis institute in

Bengaluru (then Bangalore) to develop a national tuberculosis control program (NTCP) with the aim of establishing prompt diagnosis and ambulatory treatment

that were integrated into general health services (GHS). The following table gives the evolving process of TB program in India.³⁰

Table 1: TB related efforts in India.³⁰

Event related to TB intervention in India	Year in which intervention was done
Open air sanatorium in Tilounia, Rajasthan	1906
India joins international union against tuberculosis (IUAT)	1929
King George V Thanks giving fund for TB control established	1929
TB association of India established	1939
Bhore committee suggests remodeling of TB program	1943
Bhore committee outlined plan for TB	1946
TB division in DGHS established at centre	1949
Mass campaign on BCG vaccination covering 65 million children	1951
ICMR survey tells people with TB are 80 million in the country out of which 80% reside in rural areas	1955-1958
TB chemotherapy centre established at Chennai. Currently called TB research centre	1956
National tuberculosis institute (NTI) established in Bengaluru. Currently, it is named as national institute for research in tuberculosis (NIRT).	1959
National tuberculosis program (NTP) piloted in the state of Andhra Pradesh	1961
NTP covers 390 districts which is 81% of all the districts in India	1978
Treatment regimen of 12-18 months developed by TB Research Centre	1978
TRC piloted the short course chemotherapy (SCC) regimen in 18 districts	1983
SCC extended to 252 districts	1986
NTP finds no impact on the prevalence of TB	1990
Review of NTP done and decision to revitalize NTP	1992
RNTCP piloted covering 2.4 million people based on DOTS	1993
RNTCP covers 13 million people	1995
RNTCP covers 20 million people	1996
RNTCP launched as a national program	1997
RNTCP DOTS program launches district TB control society	1997
Stop TB strategy launched as per WHO's 6 point strategy and aligns with MDG till 2015	2006
Public private mix DOTS approach launched (PPM-DOTS)	2008
Indian medical professional association coalition against TB (IMPACT) launched.	2009
National frame work for joint TB/HIV collaboration	2009
SDG goal # 3.3 includes to end epidemics of TB (90% reduction in TB deaths, 80% reduction in TB incidence rate/less than 20 per 100,000 population, zero TB affected families facing catastrophic costs due to TB)	2015
National TB elimination program launched as per the national strategic plan in year 2020.	2017-2025
BPAL (Bedaquiline, pretomanid and linezolid) regime launched as oral drug therapy	2017
Nutritional support to TB patients (Nikshay poshan yojana) launched	2018

CURRENT SITUATION IN INDIA

As per the India TB report, 2024, as on March 2024, the Ni-Kshay Mitra (TB patient friendly portal) data informs that there are 13.46 lakhs patients in India and out of these, 9.57 lakhs receive Ni-Kshaya support. The portal further informs that average weight gain is 4.2 kg in beneficiaries in comparison to non-beneficiaries. The total number of Ni-Kshaya Mitra registered are 1.57 lakhs and the number of mitras agreed upon is 1.23 lakhs. The total number of TB patients supported by Ni-Kshaya Mitra is 9.49 lakhs. Finally, the portal informs that the total number of food baskets distributed is 14.80 lakhs.^{26,27}

The WHO report, 2022 on TB and India TB report, 2024 presumes that missing childhood TB cases impede achieving 2025 goal of eliminating TB from India. Globally, at least 1.2 million children aged less than 15 years fall ill with TB every year. Only 44% of these cases get detected. The report also mentions that TB is the leading cause of death from infectious diseases for children. The estimated mortality of children with TB who fail to receive treatment is about 22%.^{26,27,29}

On that line, the Indian council of medical research (ICMR) supported Reducing activation of tuberculosis by improvement of nutritional status (RATIONS) trial published in 2021 found a 10 kilogram of food basket

really helped as risk of TB death reduced by 60% with a weight gain of 5%. The study mentions that body weight at diagnosis is predictive of higher risk of death while weight gain in the first two months was protective against TB deaths. It is inferred that food based nutritional support is to be considered an essential part of care with anti TB therapy rather than optional component which is dependent on availability of donor support. The two year study found that there was nearly 40% reduction in the rate of all types of TB and nearly 50% reduction of lung TB. Thus, the study reaffirmed that nutritional improvement can provide significant protection against lung TB gives a new tool for prevention that has added benefits towards positive health and productivity.³¹⁻⁴⁵

As nutrition is critical to the fight against TB, it is here that the concept of Satwik, Rajasik and Tamasik type of foods as per India's ancient tradition of ayurveda will come in handy. However, the concept has to be applied at each house hold keeping in mind the socio-economic status of each house hold.⁴⁶

HOMOEOPATHIC ANGLE

In Homoeopathy, tuberculosis is seen as a diathesis and as a Miasm as well. In tubercular diathesis, the individual will be susceptible to cold and related issues where as in Miasm, the individual will have poor muscle growth, low body weight and thus low vitality. Here, diathesis is the susceptibility of the body towards the tubercular tendency and Miasm is the tuberculosis causing dynamic influence in the body that is infectious in nature. Both the conditions are the stages of the tubercular body that prepares a ground for harboring TB bacteria in body.⁴⁸⁻⁵⁷

Homoeopathy has 'nosodes' for TB. Nosodes are prepared from the disease-causing organisms or their related products. For example, the drug 'Bacillinum' is prepared from TB sputum and it was prepared by Dr. Heath. It was named and described by Dr. Burnett.⁴⁸⁻⁵⁷

The other nosode is 'tuberculinum bovinum'. This is also called 'tuberculinum' of Koch. The nosode is prepared either from Tubercular abscess or from a glycerine extract of pure cultivation of Human Tubercular Bacillus.⁴⁸⁻⁵⁷

Dr. J.H. Clarke of England found no appreciable difference between the action of 'bacillinum' and 'tuberculinum bovinum'. His impression was that they are practically identical and that one will answer to the indication of other. Both these drugs were proved in 1893.⁴⁸⁻⁵⁷

The first provers were TB patients and only pathogenetic symptoms were recorded during proving/human clinical trial (HCT). During proving, the 30 CH (Centicimal Hahnemann) potency was used.⁴⁸⁻⁵⁷

It is to be noted that actually these drugs are constitutional drugs or ploychrest (multiple use) drugs

that are not only prescribed to TB and TB related cases but also for a myriad of problems that are beyond the purview of TB.⁴⁸⁻⁵⁷

Another nosode is 'tuberculinum aviaire' that is prepared from 'chicken tuberculosis'. It is prepared from the TB infected liver of chickens. Dr. Cartier introduced this Nosode to Homoeopathy during the session of international homoeopathic congress in 1896.⁴⁸⁻⁵⁷

The other nosodes are 'koch's lymph', 'tuberculinum testis', 'tuberculinum bacillinum', 'tuberculinum rosen', 'tuberculinum marmorek', 'tuberculinum residum'.⁴⁸⁻⁵⁷

Besides the nosodes, homoeopathy has drugs prepared from other sources like elements and their compounds and from botanical sources.

These drugs are 'Narcissus poeticus', 'Narcissus pseudonarcissus', 'Tussilago farfara', 'Tussilago petasites', 'Prunus virginiana', 'Stannum met', 'Stannum iod', 'Cetraria islandica', 'Acalypha indica'. 'Natrum ars', 'Pneumococcin', 'Fel vulpis', 'Pectens jacobaeus', 'Ars. Iod', 'Nat Ars', 'Lippia mexicana', Antim Iod', 'Silicea' and 'Beta vulgaris'.⁴⁸⁻⁵⁷

Other drugs are 'calc phos', 'calc carb', 'hepar sulph', 'iodum', 'kali carb', 'lachesis', 'nitric acid', 'oleum J', 'phosphorus', 'psorinum', 'sanguinaria', 'senecio', 'sepia', 'spongia', 'sulphur', 'theridion', 'zincum met'.⁴⁸⁻⁵⁷

'Kreosote' is a medicine for XDR, MDR cases as it is prescribed in neglected cases of TB. Incipient cases of TB need 'iodum' and 'tuberculinum'.⁴⁸⁻⁵⁷

All these above drugs are mentioned primarily for pulmonary and bronchial tuberculosis but they can be also prescribed for extra pulmonary tuberculosis. There are some medicines that can be prescribed for specific extra pulmonary tuberculosis. In case of bone TB, 'natrum silico flouricum' can be prescribed. If there is weakness in these cases of TB, drugs like 'ars iod' and 'chininum ars' can be prescribed.⁴⁸⁻⁵⁷

Recurrence cases of TB need 'ferrum phos' and 'kali nitricum'.⁴⁸⁻⁵⁷

When stone cutters suffer from TB, they need 'calc carb', 'lycopodium', 'pulasatilla' and 'silicea'.⁴⁸⁻⁵⁷

Among bowel nosodes, 'bacillus gartner' can be prescribed to correct the stage of malnutrition in TB patients. Being a bowel nosode, it will improve the gut immunity of TB patients there by helping the body to optimize the uptake of nutrition. Another bowel nosode is 'VAB' that is prepared from the BCG vaccine.⁵⁴⁻⁵⁹

Among the Bach flower remedies, 'mimulus' can be prescribed to TB patients to get rid of the fear of TB as it

is a chronic phenomenon. Similarly, 'rescue remedy' can also be prescribed to help them overcome the terror, tension and impatience.⁵⁷

Similarly, for weight gain in TB patients, drugs like 'hydrastis', 'medicago sativa', 'sterculia', 'china', 'calcareo phos', 'ambra grisea' and 'silicea' can be prescribed.⁴⁸⁻⁵⁷

CONCLUSION

Some people working in the TB program attribute to the resurgence of TB to program fatigue since the issue of TB is multi dimensional, multi factorial, multi types and pluralistic in nature there by throwing challenges to the stakeholders of TB for centuries now.

Attaining universal health coverage through the active inclusion of AYUSH in India is a sustainable way to deal with the perennial issue of TB. As mentioned above, through the eyes of medical pluralism, homoeopathy has a way to deal with the TB in the body before the TB bacteria wins the battle. During the course of chemotherapy, homoeopathy will catalyze the immunity of the body while reducing the side effects of the chemotherapy in the body.

When the case becomes complex through the emergence of MDR and XDR, again homoeopathy has a role to help the body to overcome these issues as a complementary while helping the body to catalyze the immunity and helping the body to optimize the benefits of the nutritional interventions that are critical in TB intervention.

What is most beneficial is that Homoeopathy can cover masses as it encompasses all the qualities of EM. Active integration of Homoeopathy of AYUSH will help the country to achieve the sustainable development goal related to TB by the next 6 years.

Homoeopathy can treat up to the stage of 'Ghon focus' especially in children along with all other management, therapeutic and dietary modalities as the focus is a primary lesion in the sub-pleural region in the mid and lower lung zones.

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