



**Research Article**

**A SURVEY TO KNOW THE COGNITION OF TB RELATED KNOWLEDGE, ATTITUDE & PRACTICE AMONG THE UNDERGRADUATE MEDICAL STUDENTS**

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**ABSTRACT**

**Background:** Undergraduate medical students being the future treating doctors, knowledge about TB in them is of at most importance. Not only to correctly recognize, diagnose and treat TB patients but also to help them to take required precautions to protect themselves from getting infected with TB. Hence this study was conducted to know the knowledge, attitude and practice about the contagious disease- TB among the undergraduate medical students.

**Material and methods:** A cross-sectional, questionnaire based study conducted in department of Microbiology of Jawaharlal Nehru Medical College, KLES Dr. Prabhakar Kore Hospital and Medical Research Center, KAHER's, Belagavi. A total of 134, 2nd year MBBS students took part in the study. All the students were given pretested, semi-structured questionnaire. All the data collected was entered in Microsoft Excel. Percentage was used to analyze the data.

**Results:** 95.6% of the students were aware that TB is a curable disease, and the knowledge about the free available of DOTS among 85% of them. 68% of them were aware that sputum microscopy is one of the main means to diagnose TB.

**Conclusion:** Along with the existing curriculum which includes topics on TB, there is a need for promoting integrated multidisciplinary study program mainly focusing on PBL(Problem Based Learning) and active learning strategies like seminars, CME/Conferences etc., which will further enhance students' knowledge about TB and also helps to bring about positive behavior changes in them towards TB patients thus helping them in better diagnosis and treatment, in turn decreases TB incidence / burden as well helps in decreasing emergence of MDR-TB.

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**INTRODUCTION**

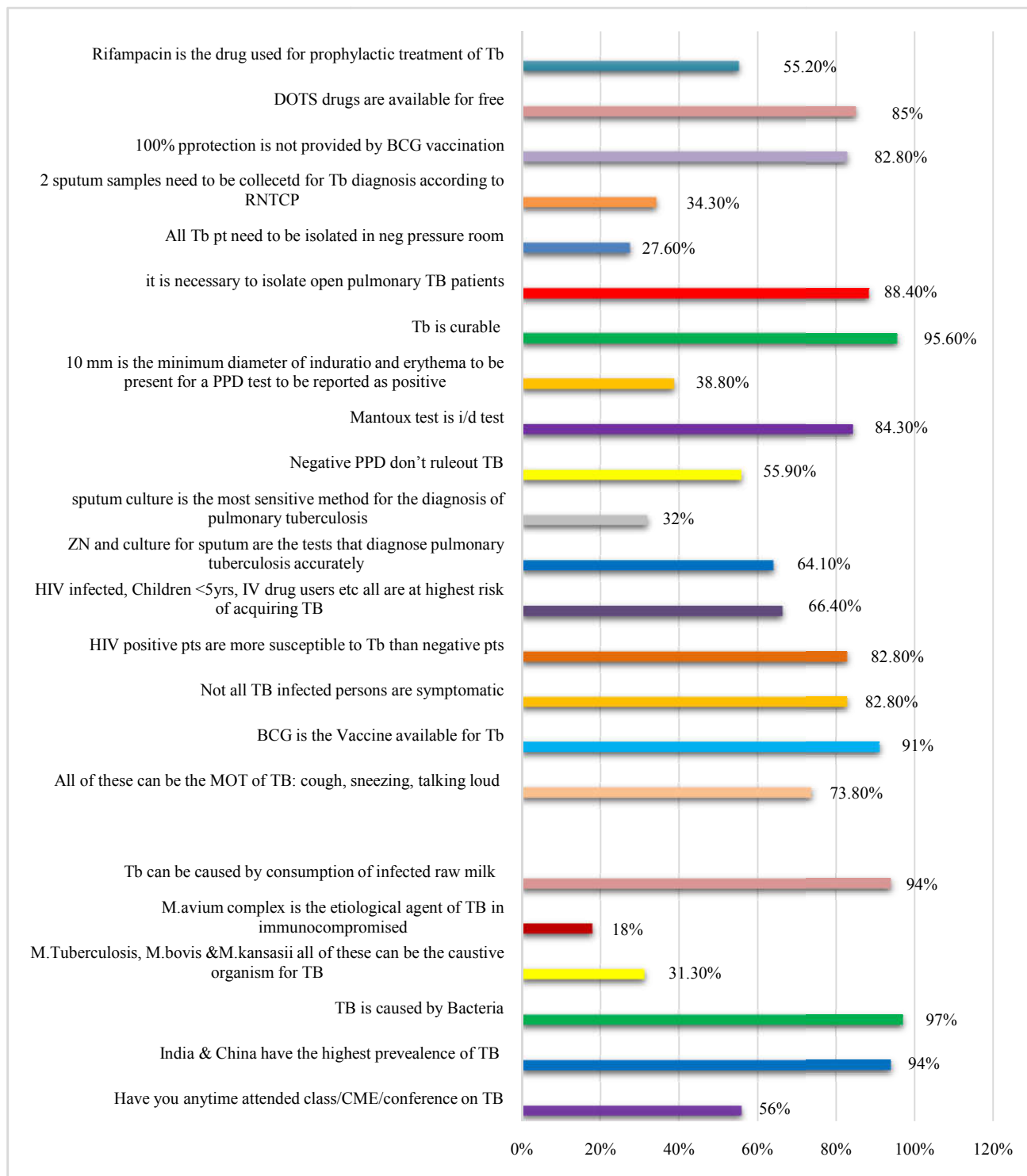
Tuberculosis (TB) is one of the major global health problems of communicable diseases. TB ranks the second leading cause of death of infectious disease worldwide next to HIV.<sup>1</sup> Common age group affected with TB is 15-60 yrs. More than 5000 Indians develop TB every day and more than 1000 die of TB which accounts for 2 deaths due to TB every 3 minutes.<sup>2</sup> With the increasing incidence of HIV, TB incidence has also increased in several countries. WHO has estimated that 5% of TB patients are co-infected with HIV.<sup>3</sup> The main reason for the increasing incidence of TB is lack of proper diagnosis and treatment due to insufficient knowledge among the doctors itself about TB. This has also led to the development of MDR-TB across the world.<sup>4,5,6</sup> To control this problem of increasing incidence of TB, WHO has framed an expert committee of National TB Program (NTB) which was reviewed twice; once in 1992 and then in 1993. The main

objective of this program was to achieve 80% cure rate in new SSP cases and to detect at least 70% of them. This program also defined the criteria for suspicion, diagnosis, categorization, treatment, follow up and outcome in TB patients. The highlight feature of this program is treating and supervision of patients on OPD basis rather than hospitalization by introducing DOTS where all patients receive anti tubercular drugs from RNTCP under direct supervision.<sup>3</sup>

Undergraduate medical students being the future treating doctors, knowledge about TB in them is of at most importance. Not only to correctly recognize, diagnose and treat TB patients but also to help them to take required precautions to protect themselves from getting infected with TB. Hence this study was conducted to know the knowledge, attitude and practice about the contagious disease- TB among the undergraduate medical students.

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**Table 1** Percentage of enrolled students who correctly answered tuberculosis related questions.



## MATERIAL AND METHODS

**Study Design-** Cross sectional.

**Study type-** Observational

**Study place-** Jawaharlal Nehru Medical College, KAHAR, Dr. Prabhakar Kore Hospital and MRC, Belagavi.

**Study Population-** 134 students in 2<sup>nd</sup> year MBBS, who were present on the day of data collection were enrolled for participation in the study.

**Sampling method-** Universal sampling method

**Methodology-** All the students were given pretested, semi-structured questionnaire after explaining the objectives of the study in detail.

Questionnaire was prepared based on WHO guidelines and by review of previous literatures of the related published studies.<sup>7,8,9,10,11,14</sup> Questions were then short-listed to be included in the final questionnaire. Questionnaire consisted of three sections, including knowledge, attitude and practice about Tuberculosis disease. Students were encouraged to give

their frank opinion and their anonymity was maintained by asking them not to mention their name/ roll number on the forms. After 45 minutes students were asked to submit their forms individually on the same day. Informed written consent was taken from all the students

**Statistical Analysis-** All the data collected was entered in Microsoft Excel. Percentage was used to analyze the data.

## RESULTS

## DISCUSSION

As we all know Tb is one of the most important infectious disease which is continuing to pose global challenge. There is always a need to develop cost effective ways to control this infectious disease TB especially in country like ours which has the highest incidence of TB. WHO and International Union against TB and Lung disease have called for campaigns to increase the awareness of TB and training in universal precautions being made mandatory for all professionals of health sciences in many countries.<sup>12,13,14</sup>

Medical students being the future health care providers, their understanding about TB is very important. In this survey of assessing the knowledge, attitude and practice of TB disease among the MBBS students showed that most of the students were unaware of the revised RNTCP guidelines for collection of sputum samples for diagnosing TB. Only 34% of them aware that 2 sputum's need to be collected instead of 3. Only 38.8% of students were aware about the interpretation of PPD test which is the basic test which every MBBS students has to know. The knowledge that sputum culture being the gold standard test was known by only 32% of the students. In immunocompromised *M. avium* is the leading cause of TB and the knowledge about the same was present in only 18% of them, and with the increasing incidence of HIV, this knowledge is very important to be known by the MBBS students. 95.6% of the students were aware that TB is a curable disease, this knowledge in them is very important, as they as treating doctors need to counsel the patients and their relatives about the curability of TB disease which will in turn improve the compliance of patient towards the treatment as well as follow up. Also the knowledge about the free available of DOTS among 85% of them will help in treating TB patients as that the patients are not financially burdened for treatment cost.

Various studies have reported lacunae in knowledge and attitude about TB among the MBBS students. In a study by Swati B *et al*;<sup>7</sup> only 19% of the students knew that TB and HIV need to be screening in all patients who come with anyone of the condition too. Another study<sup>15</sup> showed 38% of the students being aware of sputum smear for AFB being the optimal test for diagnosis of pulmonary TB, while in our study 68% of them were aware of the same.

So to overcome this gap in the knowledge in the MBBS students, in our institute we thought of conducting sensitization programme for all interns, PG's and staff about RNTCP guidelines. For this program, three staffs (one from pulmonary department, one from Microbiology and one from Community medicine were trained from RNTCP). They then conducted the sensitization program on various topics of TB including the recent changes in diagnosis and treatment. Also included the prevention and prophylaxis topics in view of increased incidence of TB among the health care providers

itself, which is mainly due to the lack of knowledge/negligence towards following universal safety precautions/ use of personal protective equipment's. It was also thought of introducing problem based learning methodology as well as integrated teaching lectures to cover the topic TB for MBBS students.

## CONCLUSION

Our study found that the knowledge, attitude and behavior among the undergraduate medical students about TB was fairly good. Along with the existing curriculum which includes topics on TB, there is a need for promoting integrated multidisciplinary study program mainly focusing on PBL (Problem Based Learning) and active learning strategies like seminars, CME/Conferences etc., which will further enhance students' knowledge about TB and also helps to bring about positive behavior changes in them towards TB patients thus helping them in better diagnosis and treatment, in turn decreases TB incidence / burden as well helps in decreasing emergence of MDR-TB.

**Conflict of Interest:** None declared

**Source of support:** Nil

**Ethical permission:** Institutional ethical permission obtained.

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