International Journal of Community Medicine and Public Health
Revathi R et al. Int J Community Med Public Health. 2018 Feb;5(2):644-646
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20180243

Original Research Article

Knowledge about tuberculosis among undergraduate medical students in a private college in Chennai

Revathi R.*, Dharanisri R.

Department of Community Medicine, Chengalpattu Medical College, Kanchipuram, Tamil Nadu, India

Received: 27 November 2017
Revised: 20 December 2017
Accepted: 21 December 2017

***Correspondence:**
Dr. Revathi R.,
E-mail: dr.revsathya@gmail.com

ABSTRACT

Background: Tuberculosis is an ancient global public health problem. In India despite of persistent government efforts in the form of revised national anti-tuberculosis programme (RNTCP) and directly observed treatment strategy (DOTS), TB still remains a major cause of mortality and morbidity in India. Multi-drug resistant TB and extensively drug resistant TB are other threats to present anti-TB strategies.
Methods: Hence the present study was undertaken to assess the knowledge of undergraduate about tuberculosis under various headings of about tuberculosis, etiology, risk factors, diagnosis, complications and treatment. The present cross-sectional study was done in the private medical college in Chennai among 90 undergraduate medical students.
Results: Regarding knowledge of tuberculosis, clinical features of TB, was more than 80% in interns. But the knowledge about diagnosis was only 70%. At the same time the treatment options and drugs available was known to 85% of undergraduates. Correct duration in months and schedule of giving drugs on alternate days was not known to 15% of students.
Conclusions: Although awareness is created through world tuberculosis day, CMES, conferences, yet hands on training in treating tuberculosis to be given to the undergraduates as this the crucial period for learning.

Keywords: Tuberculosis, Knowledge, Medical students, Chennai

INTRODUCTION

Tuberculosis is an ancient global public health problem. In India despite of persistent government efforts in the form of Revised National Anti-Tuberculosis Programme (RNTCP) and directly observed treatment strategy (DOTS), TB still remains a major cause of mortality and morbidity in India.[1] Multi-Drug Resistant TB and extensively drug resistant TB are other threats to present anti-TB strategies.[2] Globally, 3.7% of new cases and 20% of previously treated cases are estimated to have MDR-TB. Data from studies conducted by NIRT Chennai and NTI Bangalore are indicative of a primary drug resistance level of 1.7 to 2.2% and 12 to 13% in retreatment cases, in some places up to 17.2%.[3] Problem of MDR-TB is largely attributed to inadequate treatment of TB either by doctor or patient. For correct prescription, correct knowledge of disease, treatment as well as complications required. Undergraduate period is a crucial period in the curriculum of a doctor, where a student acquires new skills and applies his theoretical knowledge into the practice. Hence the present study was undertaken to assess the knowledge of undergraduate about tuberculosis under various headings of about tuberculosis, etiology, risk factors, diagnosis, complications and treatment.

Objective

To assess the knowledge about tuberculosis among undergraduate medical students in a private medical college in Chennai.

METHODS

The present cross-sectional study was done in the private medical college in Chennai. Total of 90 undergraduate students of third year M.B.B.S who were willing to participate were included in the study. The students who did not give consent were excluded from the study. Details of the study were explained to the students during community medicine theory class. The total study period was three months (October 2014-January 2015). They were provided with the questionnaire and made to return after filling it in front of the author. Maximum time allotted was forty minutes. Pre-designed survey proforma was used consisting questions regarding knowledge of Tuberculosis and MDR-TB. Questionnaire included total 38 questions which considered etiology, risk factors, clinical features, diagnosis, and treatment and national Health programme guidelines. Questions had both single and multiple response. The questionnaire was pretested on 20 undergraduates modified and necessary change made accordingly. RNTCP guidelines of 2013 considered as standard. Results were analyzed as correct response, incorrect Response. Statistical tests include percentages and Chi square test.

RESULTS

As shown in Table 1, Knowledge of tuberculosis, clinical features of TB, was more than 80% in interns. But the knowledge about diagnosis was only 70%. At the same time the treatment options and drugs available was known to 85% of undergraduates. Correct duration in months and schedule of giving drugs on alternate days was not known to 15% of students. Consequences of irregular treatment of TB were also known to around 95% of Undergraduates. Questions regarding National Health programme guidelines were answered correctly only by 60% of the students. The study also shows knowledge about multi-drug resistant TB which was very less among undergraduates. While definition of MDR-TB was known to 70% of students, its causes were not known to 36%. Diagnostic test available for MDRTB known to only 40%. All the second line drugs were known to only 17%.Treatment options are only known to only 14%. Only 4% of students knew the definition of XDR-TB. From the table difference between knowledge of causation, clinical features, categories, diagnosis, treatment between tuberculosis and MDR-TB was highly significant.

Table 1: Knowledge about tuberculosis.

Question	Correct response (%)	Incorrect response (%)
Cause of TB	72 (80)	18 (20)
Route of transmission	88 (98)	2 (2)
Common symptom of TB	72 (80)	18 (20)
Sites are affected by TB	88 (98)	2 (2)
Diagnostic test of TB	63 (70)	27 (30)
Available treatment of TB	77 (85)	13 (15)
Category of treatment of TB	77 (85)	13 (15)
First line drugs of TB	77 (85)	13 (15)
Total duration of TB treatment	77 (85)	13 (15)
DOTS	77 (85)	13 (15)
Consequences of irregular treatment	60 (67)	30 (33)

Table 2: Knowledge about MDR-TB.

Questions	Correct response (%)	Incorrect response (%)
What is MDR-TB	63 (70)	27 (30)
Definition of MDR-TB	63 (70)	27 (30)
Causes of MDR-TB	63 (70)	27 (30)
Diagnostic test of MDR-TB	36 (40)	54 (60)
Category of MDR-TB	36 (40)	54 (60)
Total duration of MDR-TB	17 (18)	73 (82)
DOTS plus	17 (18)	73 (82)
XDR-TB	15 (17)	75 (83)

Table 3: Comparison of Knowledge of undergraduates for tuberculosis and MDR TB.

Tuberculosis	N (%)	MDR TB (%)	P value
Knowledge of causation	72 (80)	63 (70)	0.12
Clinical features	72 (80)	63 (70)	0.12
Categories	77 (85)	36 (40)	<0.001

Tuberculosis	N (%)	MDR TB (%)	P value
Diagnosis	63 (70)	36 (40)	<0.001
Treatment	77 (85)	17 (18)	<0.001
Consequences	60 (67)	15 (17)	<0.001
RNTCP	77 (85)	15 (17)	<0.001

DISCUSSION

It is very important to have thorough knowledge of the disease when one is intended to treat. Undergraduates is a very crucial period where theoretical knowledge has to be applied practically.[4] TB is an ancient infectious disease with new threat of MDR TB and XDR TB but today representing 20% of global burden.[5-7] TB is always amenable to change in the diagnostic or treatment criteria. In this study it is found that though correct knowledge about tuberculosis was present in 80%, it was present less than 40% for MDR-TB. More than 70% of undergraduates knew the definition of MDR-TB, but gap in the knowledge about diagnosis and treatment was very vast. Many students were aware of previous criteria and recent change in criteria was known to only few students, because they are not frequently updated in books. Other researchers had done study on M.B.B.S students.[8-10] Other researchers had done study on M.B.B.S students, nursing staff and paramedical staff. In a study done by Kiefer et al, only half of the medical professionals identified the correct method of diagnosis as sputum. In a study done by Kutare et al only 38% correctly answered the method of diagnosis.

CONCLUSION

RNTCP is a horizontal National Health programme. Many students are not aware of the registration forms, DOTS Strategy, and policy guidelines. Although awareness is created through world tuberculosis day, CMES, Conferences, yet hands on training in treating tuberculosis to be given to the undergraduates as this the crucial period for learning

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. World Health Organization. Global tuberculosis report, 2012. Available at: www.who.int/tb/publications/global_report /en/. Accessed on 5 November 2013.
2. Central TB division, Ministry of health and family welfare. TB India 2013: RNTCPAnnual Status Report. New Delhi: NirmanBhavan; 2013.
3. Sarin R. MDR-TB-Interventional strategy. Indian J Tuberc. 2007;54:110-6.
4. Kiefer E, Shao T, Carasquillo O. Knowledge and attitudes of tuberculosis Management in San Juan de Lurigancho district of Lima, Peru. J Infect Dev Ctries. 2009;3(10):783-8.
5. Kutare A, Rosario M, Goudb N. A Study on Knowledge of Tuberculosis, DOTS And MDR-TB among Interns of Medical Colleges in Bangalore. Int J Health Sci Res. 2012; 2(3):32-8.
6. Khan JA, Zahid S, Khan R, Hussain SF, Rizvi N, Rab A, et al. Medical interns' knowledge of TB in Pakistan. Trop Doct. 2005;35:144-7.
7. Rajpal S, Mittal A, Dhingra VK, Malhotra R, Gupta R, Malhotra C, et al. Knowledge, Attitude and Practices regarding Tuberculosis and DOTS among interns in Delhi. Ind J Coll Physicians Surg Pak. 2007;17:457-61.
8. Giri PA, Phalke DB. Impact of sensitization workshop on knowledge regarding tuberculosis among final year medical students. International Journal Medicine Public Health. 2013;2(3):100-3.
9. Busari O, Adeyemi A, Olusogo B. Knowledge of tuberculosis and its management Practices among medical interns in a resource-poor setting: implications for disease control In sub Saharan Africa. The Internet Journal of Infectious Diseases. 2013;6(2):1-5.
10. Singla N. Survey of knowledge, attitudes and practices for tuberculosis among general practitioners in Delhi, India. Int J Tuberc Lung Dis. 1998;2(5):384-9.

Cite this article as: Revathi R, Dharanisri R. Knowledge about tuberculosis among undergraduate medical students in a private college in Chennai. Int J Community Med Public Health 2018;5:644-6.