Original Article

AWARENESS ABOUT RNTCP AND DOTS GUIDELINES AMONG HEALTH CARE PROFESSIONALS OF A TERTIARY CARE HOSPITAL OF SOUTH INDIA

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ABSTRACT

Background: Nursing and house surgeons' roles in the WHO DOTS (directly observed therapy short course) strategy cover the entire spectrum of activities, including advocating for political commitment, case detection, administering and monitoring drug regimens, ensuring a regular supply of medicines, and standardizing recording and reporting systems. In view of this, their knowledge regarding TB disease, RNTCP, and the current guidelines of WHO DOTS strategy, was assessed.

Materials & methods: A cross sectional study was conducted among 82 nurses and 25 house-surgeons between May to July 2012 in a tertiary care hospital of South India. A pre tested structured questionnaire was used to assess their awareness on TB disease, RNTCP and DOTS guidelines. Awareness was assessed using scores and analysed by mean, proportions and Chi square test, using Microsoft Excel 2010.

Results: The knowledge about TB, RNTCP and new DOTS guidelines was 28.0%, 63.4% and 19.5% respectively among nurses and 84%, 60% and 40% respectively among house-surgeons.

Conclusion: The level of awareness regarding TB and RNTCP guidelines amongst the house-surgeons and nurses was satisfactory but the knowledge regarding the new DOTS guidelines was inadequate.

Key words: RNTCP, DOTS, Nurses and house surgeons

INTRODUCTION

Tuberculosis (TB) is a major public health problem in India and accounts for one-fifth of the global incident TB cases. Each year nearly 1.9 million people in India develop TB, of which 0.87 million are infectious cases[1]. In India an estimated 2.56 lakh deaths occur from TB every year. Since 1993, the Government of India has been implementing the WHO-recommended DOTS strategy via the Revised National Tuberculosis Control Programme (RNTCP)[1].Human resource development (HRD) for DOTS activities within the RNTCP, should address a broad agenda which includes the overall management of training and issues related to staffing. The long-term goal for HRD for DOTS is to reach and sustain a situation where staff at different levels of the health system has the skills, knowledge, and attitudes (in other words are competent) necessary to successfully implement and sustain DOTS activities and there are sufficient numbers of all staff categories involved in DOTS (clinical and managerial) at all levels.(2)

Nursing and house surgeons' roles in the WHO DOTS (directly observed therapy short course) strategy cover the entire spectrum of activities, including advocating for political commitment, case detection, administering and monitoring drug regimens, ensuring a regular supply of medicines, and standardizing recording and reporting systems. Failure in any of these activities is likely to contribute to treatment failure and to the development of drug resistance. Nurses and house surgeons working in health-care settings are often the first to identify and manage suspected TB cases; this early identification is essential to ensuring a high level of case detection and is a cornerstone of TB control. Strengthening initiatives should not just target nurses working in specialist TB services, but the generalist nurses as well. Theyare responsible for educating and supporting patients with TB, detecting medication side effects, ensuring adherence to and completion of treatment and educating and supporting patients at home through follow-up clinics, where appropriate. Nurses are also responsible for screening those who have been in close contact with patients with infec-

tious TB. Because of their frontline presence in all health-care facilities and their diversity of skills, nurses are the natural ally in the fight against TB. Hence a thorough knowledge regarding TB disease, RNTCP, and the current guidelines of WHO DOTS strategy, is crucial for both nurses and house surgeons in health care settings like tertiary care hospitals. With this background, the present study was done to assess the knowledge regarding TB, its control strategies and current DOTS guidelines amongst the nurses and house surgeons of a tertiary hospital of South India.

METHODOLOGY

This hospital based, Cross sectional study was conducted between May to July 2012, in a tertiary care hospital. An ethical clearance was sought from the Institutional Ethics Committee and prior permission was also taken from the respective Principals of the Medical and Nursing Colleges, for interviewing house-surgeons and nurses respectively. Information was obtained from the nursing staff and current batch of house-surgeons (May to July 2012). Out of the 330 nurses and 100 house-surgeons, a 25% representative sample was taken, i.e. 82 nurses and 25 house-surgeons by using systematic random sampling to work out a sample size of 107 participants. A pilot study was carried out on 10 randomly selected nurses and 10 house-surgeons to test appropriateness of the questionnaire. It was modified accordingly but the data obtained in pilot study was not included in the main study. This pre tested structured questionnaire was used to assess their awareness on RNTCP and DOTS guidelines. After obtaining informed consent, information was sought on participants' age, sex, work experience, clinical symptoms and modes of transmission of TB, awareness about DOTS strategy, current guidelines viz. knowledge about number of sputum specimens to be examined, categories and phases of treatment, DOT provider etc. There were 4 questions related to knowledge about TB, 11 questions regarding RNTCP and its guidelines and 5 questions on new DOTS guidelines. Each question was allotted a score for correct answer and the level of knowledge was assessed on the basis of the score obtained by the participant. The score was graded as, poor (< 50%), satisfactory (50-75%), and good (> 75%). The data so obtained was compiled using Microsoft Excel 2010 and analysed by mean, proportions and Chi square test, Microsoft Excel 2010.

RESULTS

There were 79 females and 28 males in the study group. Most of the study participants (F=14, 58.30% and M=11, 78.60%) were in the age group of 20-25 years. Amongst the nurses, maximum (F=52, 65.80%; M=15, 53.60%) were diploma holders [Table no.1]. About two thirds of the nurses (n=60, 73.2%) attended training on RNTCP whereas only one house-surgeon reported to have attended the same [Table no.2]. The maximum and minimum score of nurses was 5 and 16 respectively while that of house-surgeons was 8 and 19 respectively. Majority of the study participants (n=77, 71.96%) obtained a score of50% and above.[Table no.3].The knowledge about TB, RNTCP and new DOTS guidelines was 28.0%, 63.4% and 19.5% respectively among nurses and 84%, 60% and 40% respectively among house-surgeons. Both groups of study participants had an adequate knowledge of RNTCP guidelines. But, nurses had less knowledge about TB disease and new DOTS guidelines as compared to house-surgeons [Table no.4]. Most participants with 0-4 years of work experience showed a better awareness score than those who were more experienced (P=0.307). Majority of those participants who attended a prior RNTCP training had a satisfactory level of awareness than those who did not attend training (P< 0.001) [Table no.5].

Table 1: Distribution of study participants

Age (in Years)	Males (%)	Females (%)	Total (%)
20-29	21(30.8)	47(69.2)	68(63.5)
30-39	7(18.9)	30(81.1)	37(34.6)
40-49	0	2(100)	2(1.8)
Total	28(26.1)	79(73.8)	107(100)

Table 2: RNTCP training status of study participants

RNTCP Training	Nurses (%)	House-surgeons (%)
Attended	60 (73.2)	1 (4.0)
Not attended	22 (26.8)	24 (96.0)
Total	82 (100.0)	25 (100)

Table 3: Awareness score of study participants

Awareness	Nurses (%)	House surgeons (%)
< 50%	28 (34.1)	2 (8.0)
50-75 %	53 (64.6)	8 (32.0)
More than 75%	1 (1.2)	15 (60.0)
Total	82 (100.0)	25 (100)
Mean score ± SD	10.5 ±2.2	14.8 ±3.1

Table 4: Correct knowledge about TB, RNTCP and DOTS

Correct Knowledge	Nurses (%)	House-surgeons (%)
TB	23 (28.0)	21 (84)
RNTCP guidelines	52 (63.4)	15 (60)
New DOTS guidelines	15 (19.5)	10 (40)

Table 5: Awareness score and RNTCP training status

RNTCP Training	Poor (<50%)	Satisfactory (50-75%)	Good (>75%)	Total
Attended	26 (42.6%)	33 (54.1%)	2 (3.3%)	61 (100%)
Not Attended	15 (32.6%)	17 (37%)	14 (30.4%)	46 (100%)
Total	41 (38.3%)	50 (46.7%)	16 (15%)	107 (100%)

χ^2= 15.27, df=2, P < 0.001, highly significant

DISCUSSION

Tuberculosis is a disease that involves all the systems of the body, and doctors and nurses working in all disciplines of medicine are involved in its management. With the introduction of the RNTCP more emphasis has been placed on health education, patient counseling and directly observed treatment. Consequently, the responsibilities of nurses and other paramedical staff have also increased many-fold.[3]Tuberculosis treatment is usually domiciliary, but if admission is required patients are in prolonged contact with nurses and house-surgeons, particularly in a tertiary care hospital. Nurses and house-surgeons are usually responsible for carrying out routine investigations, treatment management and discharge of patients from the wards. The patients' many queries about the disease during their hospital stay such as mode of spread, prevention, and protection of family members, are often directed at the nurses and house-surgeons as they are more readily available than the physicians.[4].

The present study showed that substantial numbers of nurses still have inadequate knowledge even regarding the correct dosages of routinely used short-course chemotherapy drugs and minimum duration of short-course chemotherapy. At the same time, however, there is reasonably good awareness about the causation of the disease, various categories and phases in TB treatment and sputum collection. The level of awareness in nurses was lower compared to the house surgeons, which could be due to the difference in academic training offered to them. In a study done by Singla et al on nurses, who worked in a TB hospital and general hospital in Delhi, showed that a substantial number of nurses had inadequate knowledge regarding various aspects of TB disease, its diagnosis and treatment.[4].

Maximum (84%) house surgeons had correct knowledge about TB as compared to nurses, in terms of the mode of transmission, common signs and symptoms, difference between TB infection and TB disease etc. Similar findings were obtained by Singla et al where they found that nurses had inadequate knowledge about causative factors of TB [4]. Rajpal S et al noted that only 4.2% of the interns had correct knowledge about modes of transmission of TB [5]. Khan JA et al in their study on Medical interns' knowledge of TB in Pakistan, found that, 96% of 460 interns correctly mentioned the mode of transmission of TB [6]. Busari O et al observed in their study on Knowledge of tuberculosis and its management practices among medical interns in a resource poor setting, that, out of 118 interns, 107 (88.1%) correctly mentioned the mode of TB transmission [7]. Akin S et al reported in their study on, Knowledge of and attitudes toward tuberculosis of Turkish nursing and midwifery students that, the nursing students had poor knowledge about TB [8].

Both house surgeons and nurses (60%, 63% respectively) in the present study had satisfactory level of knowledge regarding RNTCP guidelines; this indicates adequate training of house surgeons during their MBBS course and an adequate RNTCP training conducted for nurses. Pradeep Aggarwal et al observed the difference in knowledge among interns, after TB posting and found that majority of them (65.9%) correctly mentioned RNTCP guidelines in terms of sputum examination for diagnosing TB [9]. Rajpal S et al observed in their study that out of 287, 189 (65.9%) interns responded in a similar manner [5]. Rahul R Bogum et al reported correct knowledge about RNTCP guidelines in 55.5% & 86.1% of first year post-graduates before and after imparting training respectively, about the guidelines of TB control[10].

The overall level of awareness about new DOTS guidelines was low for both house surgeons as well as nurses, the former a little better than the latter. This indicates a lack of update of current changes in policies and guidelines among the medical teachers or trainers who convey the same to the students. The low level of awareness in nurses indicates that the training was inadequate to impart the knowledge or the nurses have not practiced what they have been trained for. The causes thereof need to be explored.

The level of awareness did not show an association with the work experience. The RNTCP training given to nurses had imparted only a satisfactory level of awareness which is evident from the score (50-75%) they obtained in the study ($P<0.001$). Whereas the number of house surgeons who had better awareness score (75%) was more in comparison to the nurses. ($P<0.001$). This further emphasises the need for a pragmatic approach and update of knowledge in training the nurses.

CONCLUSION

The level of awareness regarding TB and RNTCP guidelines amongst the house-surgeons and nurses was satisfactory but the knowledge regarding the new DOTS guidelines was inadequate. Its impact in view of treating patients in line with the objectives of the National programme warrants better teaching practices for the medical undergraduates and pragmatic refresher training programmes for nurses. There is need for finding out a suitable paradigm for developing training programmes for health care providers in general.

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