COMMUNITY SURVEY OF KNOWLEDGE AND ATTITUDE OF TUBERCULOSIS AMONG TUBERCULOUS PATIENTS AND THEIR ATTENDANTS IN A RURAL SETUP

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Background: Tuberculosis is a common disease and health education is essential for the patients and their relatives for effective treatment of the index case and prevention of infection spread among the relatives and others.

Objective & Methods: We conducted this cross-sectional study in the catchment population of Emergency Satellite Hospital (ESH) Nahaqi,a TB diagnostic & treatment centre, to assess the impact of different DOTS treatment modalities on the knowledge about TB and attitude of the patients and their relatives.

Results: Total of 133, 58 males and 75 females, patients and their attendants accepted the invitation to participate in the study. Fifty seven percent were currently taking TB treatment, 43 had taken treatment in the past whereas 33 had never suffered from TB. Out of 100 patients treated under DOTS program, 21, 25 and 54 had taken treatment under supervision of LHW, relative or self respectively. Ninety two percent of the TB patients had taken treatment regularly with no interruption and none have defaulted. Correct response for exact duration and free of cost availability of Anti Tuberculous treatment (ATT) was given by 93 and 98% of the study population. Though 84% had the adequate knowledge about spread of TB bacilli but 6, 11 and 9% still think that handshaking, sharing utensils and I/V injections are also routes for getting or spreading infection. Seventy four percent and 70% of the study population will visit doctor immediately if they develop joint pains or jaundice while taking ATT.

Conclusion: Despite the use of different DOTS modalities in the study sample, the knowledge about the disease in the patients and relatives is satisfactory.

Key Words: Tuberculosis Knowledge; Attitude; Patients; Attendants

This article may be cited as: Ashraf S, Wahab F, Khan N, Anwar R, Ahmed H, Zaman M. Community survey of knowledge and attitude of tuberculosis among tuberculous patients and their attendants in a rural setup. Pak J Chest Med 2015; 21(4): 145-48

INTRODUCTION

Tuberculosis (TB) is a common disease. World Health Organization (WHO), estimated that one third of the world's population has been exposed to the mycobacterium tuberculosis.[1] Despite introduction of Directly Observed Treatment Short-course (DOTS) strategy, tuberculosis is still a leading cause of death in the developing world. Pakistan ranks 21st among the 30 high burden countries, with estimated incidence and prevalence of TB as 270/100000 and 500/100000, according to WHO report 2015. Health education is essential for the patients and their relatives for effective treatment of the index case and prevention of infection spread among the relatives and others. To increase awareness about TB among population, World TB day is observed on 24th of March every year, globally. Health education is key to success of any DOTS programme. Awareness about TB and knowledge about common side effects has shown to increase compliance rates. Different studies have shown poor knowledge and many misconceptions about TB among patients and their relatives. At ESH, Nahaqi comprehensive DOTS programme is implemented, beside dedicated treatment facilitator and involvement of lady health workers to ensure directly observed treatment component of DOTS. They have been trained in health education regarding TB among patients. Studies have shown that counseling provided during the early

stages of TB helps increase patient awareness of the importance of treatment, improves compliance and increases the cure rate.

We conducted this cross-sectional study in the catchment population of Emergency Satellite Hospital (ESH) Nahaqi, a TB diagnostic & treatment centre, with the objective to assess the impact of different DOTS treatment modalities on the knowledge about TB and attitude of the patients and their relatives.

METHODS

Every year on 24th March, ESH Nahaqi management commemorate world TB day and invites patients and their relatives who were treated or are under treatment of TB to alleviate stigma and increase awareness about this treatable disease in the community. In 2009, on world TB day 200 current and treated patients and their relatives were invited. A structured questionnaire was translated in Urdu and was first pilot tested by trained doctors and then after some modifications was administered by trained doctors to assess the knowledge and attitude towards TB, among patients and their relatives. Data was gathered regarding lady health workers visit to households. This was followed by a public awareness programme in which specialist doctors increased the awareness of TB among community and answered their queries in their native language. The data collected via structured questionnaire was then entered and analyzed using SPSS version 16.

RESULTS

Out of 200, 170 invitees came 161 gave consent to participate in the study. Mean age of study population was 33 ± 17 years, median 28 years. 101 (63%) females and 60 (37%) males. Mean age of male was 35 ± 19 and that of female was 32 ± 15 years.

Among 161 study participants, 52(32%) suffered previously and 66 (41%) were receiving currently treatment of TB, whereas 43 (27%) never suffered from TB. Only 12/161 (7.5%) responded incorrectly about total duration of treatment. Ninety seven percent females and 86% males gave correct response by mentioning 8 months of treatment.

Results revealed that out of 118 patients, 24 (20%), 30 (26%) and 64 (54%) were receiving DOTS under LHW, relative or self supervision respectively. However, despite different modalities of receiving DOTS, out of total 118 TB patients, 113 took treatment without interruption and only 5 interrupted treatment during the course. Side effects of ATT were reported as the reason for treatment interruption in only 2 (0.017%) patients and one patient admitted his laziness as the sole reason, whereas 2 refused to give any reason for interruption in treatment.

Knowledge regarding free of cost availability of ATT at TB centers were found in 156 (97%) of study population whereas rest 5 (3%) were not sure about it. Even 38/43 (91%) study respondents who were relatives and never suffered from TB were aware of free of cost availability of ATT and only 4 (9%) of them were not.

Questions assessing the knowledge about spread of TB bacilli revealed that 139 (86%) believe that it spreads via inhalation of bacilli in air, whereas 14 (9%) and 24 (15%) respectively believed that hand shaking with or eating in with resulted in spread of TB bacilli. Twenty six (16%) blamed injection or drips as a culprit in spread of TB bacilli.

Misconceptions regarding spread of TB bacilli were also present in patients and those who have been treated in past. Even 79% of the relatives were aware of the fact that TB spreads via inhalation of bacilli in air, and that hand shaking or sharing utensils with

Table 1: Response to questions regarding essential knowledge

Question	YES		NO		Don`t Know	
	N	%	N	%	N	%
Consult a doctor if urine is red colored	62	38	85	53	14	9
Consult a doctor if joint pains develop	122	76	31	19	8	5
Consult a doctor if jaundice develop	119	74	30	19	12	7
Consult a doctor if become pregnant	89	55	38	24	34	21

tuberculous patient do not cause spread of disease. However, 29% of relatives who never suffered from TB believe that TB also spreads via use of drip or injections.

Response to questions regarding essential knowledge, while using ATT results are given in tabulated form below.

DISCUSSION

World TB day is observed every year on 24th March globally which gives an opportunity to increase awareness in TB patients in particular and community in general. Improvement in knowledge regarding TB has proven to directly improve compliance and cure rate. Directly observed short course treatment strategy i.e., DOTS is an opportunity for the health care providers to improve knowledge about TB in patients and their relatives and so improve compliance and cure rate.

This study had more female participants as compare to male. This could be explained by the facts that there are more female TB patients in Khyber Pukhtunkhwa as compare to males according to PTP annual reports. Also males had to go to earn the living and therefore were unable to come and participate in study.

In our study, though DOTS was implemented via different modalities, still the knowledge of study participants was satisfactory. In national and international studies, the knowledge of TB among patients was poor.[2,3] The better knowledge in our study participants could be due to more dedicated staff at TB centre, ESH Nahaqi and also involvement of LHW's and relatives made responsible for supervision and compliance of treatment. Most of the patients 64(54%) were receiving treatment under their own supervision but at this TB centre patients can get only 10 days of treatment at a time and have to revisit the facility to get further 10 days of treatment. The staff at ESH Nahaqi contact the patient or treatment supporter if any patient fails to collect drugs within due 10 days. This modified DOTS modality provided an opportunity to have regular interaction with health care provider at facility, early detection of defaulter ensures treatment compliance.

Knowledge about duration of treatment and free of cost availability of ATT drugs in our study was found in 97% of patients and 91% of their relatives who never suffered from TB. This knowledge can be taken as good indicator of the DOTS program at ESH Nahaqi. Ninety seven percent participants knowledge about total duration of ATT is very encouraging as patients usually quit or stopped treatment once symptoms get resolved resulting in emergence of drug - resistant strains and especially Multi-drug resistant (MDR)TB,[9] hence, the health education regarding disease and it`s duration of treatment are pertinent factors not only to improve compliance, get cured outcome but also to prevent MDR TB.

Transmission and spread of TB bacilli knowledge is an utmost educational strategy that not only prevent spread of disease but also helps in reducing or alleviating the stigma related to diagnosis of TB. In our study, though knowledge regarding spread of TB bacilli is very encouraging that is 86% believe that TB spreads via inhalation of TB bacilli but a proportion of them also believe that it also spreads via hand shaking, eating in same utensils etc. Though no direct questions were asked regarding isolation of TB patients but keeping in view these concepts, we can assume that TB patient stigmatization would be still prevailing and alarming. We can find much worse situation regarding negative attitude of society against TB patients in the literature.[11,12] Such practices can only be improved by further improving health education and spreading the message via utilizing effective media campaigns and advocacy.

Anti- tuberculous drug compliance can be ensured by asking a simple question about color of urine. Orange or red colored urine is generally considered as an indicator of drug compliance.[13, 14] Fifty three percent participants in this study knew about the fact that ATT causes orange discoloration of urine and thus indirectly relate to better education provision by health care provider. Equipping the TB patients with the knowledge about common side effects of ATT improve their compliance to treatment and hence reduce default rate.[15,16] It is pertinent to note that nineteen percent of study participants refuse to consult doctor even if they develop joint pains or jaundice. This perception is not suitable and may need to be addressed, as it may lead to delay in management.[8,17]

There are some limitations of this study. The cross-sectional design didn't allow proper assessment of Knowledge, attitude and Perception of the whole community. Moreover, the study population being patients as well as their attendents may not true representation of the Nahaqi community but still it reflects the good knowledge of TB, means of spread, causative organism and duration of treatment. This may be due to home visits and educational sessions of Lady health workers.

CONCLUSION

Despite the use of different DOTS modalities in the study sample, the knowledge about the disease in the patients and relatives is satisfactory.

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