ORIGINAL ARTICLE

QUALITY OF TUBERCULOSIS CONTROL: A CASE STUDY OF DISPLACED POPULATION OF JALOZAI, PAKISTAN.

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ABSTRACT

Tuberculosis is a leading cause of morbidity and mortality especially in developing countries. Health facilities among displaced people's camp of Jalozai were assessed using descriptive cross sectional survey to determine the case load of TB, standardized regimen in accord with WHO guidelines, diagnosis, categorization and treatment. Less than 10 case loads for TB were found per month and only one health facility was following WHO/National TB Program recommended guidelines for TB detection and treatment. The only common feature among health facility appeared to be same duration of treatment in initial intensive phase. These finding suggests efforts needed to improve knowledge of health personnel an need of effective standardized treatment protocol in support with National TB control program (NTP). NTP should be strengthened to monitor medical education in tuberculosis treatment. Awareness should be created regarding TB. Reporting of mortality from TB and record keeping should be done to identify the need of effective TB controlled program.

KEY WORS:

Tb Control, refugee camp, MDR TB, Jalozai camp

INTRODUCTION:

Tuberculosis (TB) is a contagious disease and one of the leading causes of morbidity and mortality worldwide. If untreated an active TB patient can infect 10-15 people a year[1]. It stands second as a cause of death from an infectious agent (1.77 million deaths from TB in 2007[2]). According to World Health Organization (WHO) report 2009 globally there were an estimated 9.4 million new cases of TB[3-5].

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Despite increase in new cases of TB from 9.24 million in 2006 as a result of population growth, cases per capita are falling; the rates peaked in 2004 at 142 per 100,000 and declined in 2007 at 137 per 100,000 population[4, 5]. Literature review shows that 98% of 1.6 million estimated deaths from TB and 95% of the estimated 8.8 million new cases occur in developing countries[6]. Incidence of TB increases in refugee settings even higher than National TB rates[7, 8].

A person infected with HIV is 10 times more at risk of developing TB[9]. By the end of 2000, worldwide about 20% of HIV-infected people were co infected with Mycobacterium tuberculosis in South East Asia[9]. Study conducted on high mortality rates in tuberculosis in Malawi during 32 months of follow up finds 27% HIV-negative patients were dead by 32 months compared with 47% of HIV positive[10].

WHO estimates that every year eight million people become infected with TB and 95% of these cases belong to developing countries[11]. Pakistan is one of the highest estimated TB incidence cases and ranks at eight on world 22 high burden TB countries [1, 12]. Punjab, Pakistan's province reports 177 cases/ 100,000 populations which accounts 60% of Pakistan's TB burden[13]. Study conducted in Pakistan shows that only 21% doctors prescribe a correct regime in accordance with WHO and NTP guidelines[14]. One can think how worse the situation can be when private practitioners are treating 80% of patients presenting to them with this menace[14]. Prescribing the correct medication is not enough, monitoring the patient for compliance and progress is equally important[15]. Only then one can detect treatment defaulters and take immediate actions thus preventing multi-drug resistance and maintaining high standard control of the disease.

Disruption of health services following disaster, overcrowding and poor nutrition may increase the spread and development of TB on one hand and poor access to TB control program on the other hand. Humanitarian agencies have a limited intervention time that does not allow provision of medicine and successful completion of treatment of TB thus resulting in active TB patients complicating the diagnosis and menace to health[16]. Provided such circumstances many humanitarian relief organizations have debarring on TB control programs[16]. SPHERE standards suggest that poorly implemented TB in an unstable setting may do more harm than good[16, 17].

WHO states that TB program should not be started in acute phase of disaster rather it should be started until the mortality rate has been reduced to less than 1 per 10,000 populations per day[16, 18]. However if security conditions are stable and no major movement of population is expected in near future than a TB program should be implemented with funding sufficient to sustain for at least 18 months[18].

Jalozai is situated at a distance of 25 kilometers away from Nowshera. The present study was conducted in displaced people camp of Jalozai, Pakistan who has entered in the rehabilitation phase of emergency with aim of highlighting standardization and implementation of TB control program and suggesting solution for better control of TB. The lesson learned could be of use in other countries especially recovering from complex emergencies.

METHODS

A descriptive cross sectional study using a pretested structured questionnaire was developed. The research was conducted in all the health facilities working for internally displaced people from January to April 2010 by the research team in sprawling Jalozai camp, district Nowshera Pakistan. Our study population was health facilities working for displaced people. At the time of survey population of Jalozai was 108,000 displaced people (20,000 families). Permission from the camp administration was acquired after briefing them the objective of the study and informed consent was taken from the health facilities participating in the study. The anonymity of respondent was kept confidential and cultural norms were kept in consideration during interview.

Data was double coded and cross checked for anomalies. Descriptive statistics were analyzed for various variables using SPSS version 17.0.

RESULTS

There were only three health facilities for the camp population. Of these two were having standard case definitions for Tuberculosis (TB).

TB case load at health facilities ranged from 2-8 cases of TB/month. Only one facility was following WHO/National Tuberculosis Program (NTP) recommended guidelines for the diagnosis, classification (categorization) and treatment of TB. Sputum smear microscopy was the mainstay diagnostic tool; cases were categorized as Cat 1 (New) and Cat 2 (Relapse and Retreatment) cases. The facility was following standard treatment regimens for Cat 1 and Cat 2 in initial as well continuation phase. Follow up sputum smear microscopy was also in accordance with NTP recommended timeline, i.e., at end of month 2 (or three in Cat 2), month 5 and month 7.

The other two health facilities were not following NTP guidelines for diagnosis, categorization and treatment of TB. The only common point among all the three health facilities appeared to be the same duration of treatment during the initial intensive phase.

DISCUSSION

The complex emergencies can affect the TB control by interfering with the goals of identifying Multi-Drug Resistance (MDR) TB and curing patients[19]. Examples of Bosnia and Herzegovina shows that if TB is ignored it can immediately result in increased morbidity and mortality[19]. WHO targets for TB control is to cure 85% of detected sputum smear positive Pulmonary Tuberculosis (PTB) cases and detect 70% of existing sputum smear-positive PTB[9]. Literature review shows that 38-50% of deaths in eastern Sudan among refugees living in camps were because of TB[18]. In our survey we found that TB case load at health facilities in recovery stage was from 2-8 patients of TB/ month. Since reporting of deaths from TB was not done (WHO standards for implementation of TB program: death rates are < 1 per 10,000 population

per day) in any of the health facility so it is difficult to suggest to implement a TB control program for displaced population of our study.

90% of patients can be cured with drug susceptible TB, however without treatment 25% will remain ill, 25% will be healthy (strong immune defense) and 50% of active TB patients (Human Immunodeficiency Virus (HIV) negative) will be dead after five years[18]. The case detection rate in Pakistan has increased from 13% in 2002 to 67% in 2007 (WHO target 70%) [12]. Similarly Directly Observed Treatment Short course (DOTS) coverage has increased in Pakistan from 44% in 2002 to 99% in 2007[12]. The treatment rate of DOTS success has also increased from 17% in 2000 to 60% in 2006[12]**.** Our survey found that only one facility was following World Health Organization (WHO)/National Tuberculosis Program (NTP) recommended guidelines for the diagnosis, classification (categorization) and treatment of TB. The results in this parameter were very disappointing the elements (standardized short course chemotherapy and recording and reporting system) of expanded DOTS framework were not given importance. The only common point among in our survey appeared to be the same duration of treatment during the initial intensive phase. Study shows that provided TB program with strong local community support, use of directed observed therapy three times a week instead of daily and access to all areas and patients can result in TB treatment and control in conflict settings and attainment of WHO targets for cure[20] .This poor patient management, poorly controlled TB program and non adherence of the prescribed regimen can lead to development of Multi Drug Resistance (MDR) TB which is more difficult, expensive and requires longer duration of treatment[21, 22].

Surprisingly in only one health facility follow up sputum smear microscopy was in accordance with NTP recommended timeline[i.e., at end of month 2 (or three in Cat 2), month 5 and month 7]. This could lead to deterioration of patient condition and increase in recurrence rate.

CONCLUSION

The only common feature among health facility appeared to be same duration of treatment in initial intensive phase. Efforts are needed to improve the knowledge of doctors and urgent need of effective standardized treatment protocol in support with National TB control program.NTP should be strengthened to monitor under graduate and post graduate medical education in TB. Awareness of public should be created through print and electronic media “where and when to receive treatment”. DOTS program needs to expand rapidly. The authors are of the opinion that reporting of deaths from TB should be done so as to identify need of TB control program.

LIMITATION

One finds limited literature review on TB control in disaster situation in Pakistan. More research needs to be done particularly exploring TB control and MDR-TB in displaced population of Pakistan.

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