ORIGINAL ARTICLE

Assessment of Provision of Anti-Tuberculous Drugs to the Patients Attending TB Out Patient Department in Allied Hospital Faisalabad

MANSAB ALI[1], MASOOD NIZAM TABASSUM[2], NOOR UL AIN[3], *SHAHID MAHMOOD, QURAT UL AIN MATI, NOOR UN NISA ZIA[6]*

ABSTRACT

This study has been conducted at the out patients Department (TB OPD) Allied Hospital Faisalabad to evaluate the provision of Anti tuberculosis drugs to the patients and their knowledge about TB & Health facility (Allied Hospital Faisalabad). The objective was to evaluate the availability of anti tuberculous drugs at tertiary level and to highlight any shortfall at different stages of patient's treatment of tuberculosis. A total of 100 confirmed patients of tuberculosis (37 male sand 63 females) attending tuberculosis/Chest OPD of Allied Hospital, Faisalabad were selected for this study. A structured questionnaire was prepared to gather all sorts of information. The major age group (42%) of the respondents was ranging from <8 - 20 years. The next age group (39%) was of 21-40 yrs. Remaining 19% patients were in age group ranging from 41 - 60 yrs. The mean age was 27.3±13.8 yrs. Regarding the Income status of the patients, 62% were from families having income range of Rs.5000 – 10000 / month, while 27% patients belonged to families having income less than Rs.5000 per month. The remaining 11% had income in excess of Rs.10,000 / month. Out of one hundred patients, 89% demonstrated well about the schedule of the schedule and the working hours of the facility and they were satisfied. Fifty five percent patients were coming from more than 5 kilometers to reach the hospital. Majority of the patients 88% had multiple symptoms when they first came to the hospital. Forty patients were receiving treatment for pulmonary tuberculosis, while remaining, 29% patients were receiving treatment for tuberculosis of lymph nodes and 8% for tuberculosis of bone and only 3% patients were classified for other types of tuberculosis. 88% patients could not afford to buy their drugs. It was observed in the past that the anti tuberculosis drugs were not freely available, but since 2007 the anti-tuberculosis drugs have been easily available and free of cost for the patients attending TB OPD at Allied Hospital Faisalabad with the assistance of National TB control Program. 85% of the patients were registered with TB DOT Center and were receiving drugs from there while 15% patients were receiving drugs from OPD dispensary and being advised by other OPD specialties. Out of these 15% patients, 12% patients had no knowledge about this unique facility of National TB Control Program providing free diagnostic tests and anti tuberculosis drugs. There is a need for greater health education and training on tuberculosis and DOTS for community.

Keywords: Tuberculosis, Anti TB drugs,

INTRODUCTION

Health care has two connotations (a) health care programs and (b) medical care organizations. Medical care organizations are mainly providing curative care. They are attractive and high-tech oriented and they should be cost-effective[1].

In recent years, quality assurance has emerged as an internationally important aspect in the provision of health care services[2].

The health care system depends on availability, affordability, efficiency, feasibility, and other factors. Consumer satisfaction is recognized as an important parameter for assessing the quality of patient care services. Satisfaction regarding the attitude of providers toward these services is expected to affect treatment andprognosis[3].Tuberculosis is one of the most serious health problems, it is a contagious disease and targets people with poor health conditions, malnutrition and lack of immunity. The poor are badly housed and have not the financial strength to spend on medication, especially in cases where the illness prolongs, the number of tuberculosis case are increasing.

Moreover the poor are also not literate and are unable to follow the rules of good health care, thus compounding the problem and helping in the spread of the disease. The illiteracy issue can be well tackled through enhanced media campaigns but that would require a lot of funds if the campaign is to be launched through an effective medium like Television or Radio. The corporate sector needs to come forward and share their responsibility towards the society and help launch the media campaigns for education of the poor masses towards this deadly disease. It is through concerted efforts both at the level of the Government /developing agencies and the public/private sector that increased awareness can be brought to the downtrodden and sick of this nation. The impact of tuberculosis on socioeconomic status is substantial. These alarming statistics require us to devise newer ways to tackle the healthcare situation in rural Pakistan[5].

In Pakistan, failure to take appropriate doses of antituberculosis medicines for the adequate duration of 6 to 8 months by the patient is an important reason for the rising incidence of tuberculosis in the country, but the issue of compliance is much bigger than this. Studies have documented relatively poor knowledge and compliance with guidelines among practicingphysicians[6].

In order to control tuberculosis in the country, many other important issues need to be addressed. Studies one in Pakistan have shown that not only doctors working in Government Hospital, but the Specialist are also not following the National/International guide lines, recommended for the manage mentofthisdisease[7].

A detailed research and has conducted various initial experiments for improving the tuberculosis treatment. Its recommended strategy includes diagnosis through sputum examination, nearest treatment centers and short duration medicine course with DOTS[7].

---

[1]Assistant Professor Community Medicine Independent Medical College Faisalabad.
[2]Asso Prof Community medicine Avecena Medical College Lahore.
[3]HO Medicine DHQ Hospital Faisalabad.
Correspondence to Dr. Mansab Ali,
Email: drmansabali@gmail.com Cell: 0300-6661320

Tuberculosis in Pakistan: Like other developing countries, tuberculosis has been one of the major public health problems in Pakistan. Tuberculosis has been prevalent in Pakistan and unfortunately it has been one of the neglected health areas in past. Pakistan ranks 6thamongst the countries with a highest burden of TB in the world. Pakistan contributes about 54% of tuberculosis burden in the Eastern Mediterranean Region. According to WHO (2007), the incidence of sputum positive tuberculosis cases in Pakistan is 70-80/100,000 per year and for all types it is 177/100,000.TB is responsible for 5.1 percent of the total national disease burden in Pakistan. The impact of TB on socioeconomic status is substantial.[8]

Global picture of tuberculosis: Tuberculosis is a major cause of illness and death worldwide, especially in Asia and Africa. Globally, 9.2 million new cases and it was estimated by WHO that about 1.8 million people die of tuberculosis every year, and 98% of those occur in developing countries. Tuberculosis causes 2 million deaths per year. Globally 16 to 20 million people suffer from active tuberculosis (WHO/TB/98.236.Geneva,2000).

The key elements in any tuberculosis control programme are early diagnosis and prompt initiation of effective therapy. Delays in diagnosis result in an increased period of infectivity in the community. It has been estimated that each untreated smear positive patient infects on an average more than ten contacts per year[9].

Delay is divided into other decomponents namely, patient delay, health system delay and total delay. However, there is no universally accepted period fortotaldelay[10].

Tuberculosis control in Pakistan is primarily the responsibility of the government sector, which has not been fulfilled for years. In Pakistan, over 80% of the patients suffering from tuberculosis consult a private practitioner for the initial evaluation. It is important to know the prescribing habits of these doctors. Various national studies on the issue have shown poor knowledge and prescribing behavior in prescribers[11].

The majority of tuberculosis patients worldwide are still treated with single drugs, or with 2-drugfixed-dose combinations (FDCs). To improve tuberculosis treatment**,**2 to 3-drugFDCs were recommended by the WHO as part of the DOTS strategy. Recently, however, a 4-drugFDC containing 150mg rifampicin, 75mg isoniazid, 400mg pyrazinamide, and 275mg ethambutol was added to the WHO Model of List of Essential drugs which made possible an intensive-phase treatment for tuberculosis based fully on an FDC[12].

MATERIAL AND METHODS

It was a descriptive study aimed at the assessment of provision of TB drugs to the TB patients attending TB OPD in Allied Hospital, Faisalabad which is attached with Punjab Medical College Faisalabad conducted on patients attending TB OPD allied hospital Faisalabad .Faisalabad is a densely populated industrial city sharing borders with 6 Districts i.e., Jhang, Toba Tek Singh Okara, Sahiwal, Nankana Sahib & Sheikhupura. The District Faisalabad comprises of four functional Tehsils having 289 Union Councils. There are four (04) THQ. Hospitals, Eleven (11) Rural Health Centers, 168 Basic Health Units, 05 Government Rural Dispensaries, 06 MCH Centers, 35 Government City Dispensaries and 70 Zila Council Dispensaries in Faisalabad District Beside above mentioned health facilities Allied hospital Faisalabad has got a pivotal role in catering health facilities. As it is a tertiary care hospital therefore the author selected the TB Out patients department of this health facility where a lot of patients from Faisalabad and its peripheries visit for diagnosis and treatment of TB**.** Simple convenient sampling technique was u sed. One hundred patients coming to the chest OPD Allied Hospital Faisalabad were included in this study. All diagnosed cases of tuberculosis, who were receiving anti tuberculous treatment drugs were included in the study. All patients of lungs diseases other than TB were excluded. Personal interviews of the patients were conducted. A specially prepared and pre tested Performa was used for this purpose. Before starting the study permission/consent from the relevant authorities' i.e. Medical Superintendent of Allied Hospital, was taken after submitting the letter issued by the Institute of Public Health Lahore in this context. All data was entered in computer software frequency & percentage were calculated using SPSS version 17 of all numerical/categorical variables to reflect the current status of anti tuberculous drugs and their availability for patients attending out patients department at Allied hospital Faisalabad.

RESULTS

Demographic Characteristics of Health Care Users: Major age group of the respondents fell in <8-20 years of age (42%) and next is between 21-40 years (39%). Mean age was 27.3±13.8 (Fig B). And next is between 21-40 fell in 60 year of age .Mean age was 27.3 +13.8 years. Regarding the sex of the patients, out of 100 37(%) patients were males while the remaining 63(63%) were females. Keeping in view our cultural norms and settings, this age group (being young) is usually not allowed to go alone even to the health service provider. With regard to the educational status of the patients, it was observed that 19 (19%) of the patients were illiterate, 59(59%) had less than Matric qualification, 20(20%) had matric qualification and only 2 (2%) had intermediate level education (Fig A). Out of the 100 patients, 38 (38%) patients were married while 62 (62%) were unmarried (Table A).

Economic Profile of Respondents: The monthly income of the patients 62 (62%) earned 5000 – 10000 rupees per month, while 27 (27%) patients belonged to families having their monthly income less than 5000 rupees per month and only 11 (11%) of the patients had families with a monthly income of more than 10000 rupees per month.

Knowledge about Availability of Medicine at facility: Very few could spontaneously mention about Allied Hospital Faisalabad as a center for providing free treatment. On probing they could recall and remember the facilities specifically associated with TB centre. The study found a wide variation on the issue. All patients mentioned Allied Hospital Faisalabad as TB centre. Except for patients, who have heard of DOTS and most of them informed that DOTS service was available in their locality. Free diagnosis followed by free medicine was spontaneously indicated as special facilities or features available in DOTS center by the beneficiaries. Very few patients actually had the correct idea about free medicine and DOTS being surest way of curing TB. 37(37%) of the patients referred to this facility by other health centers owing to lack of facilities and availability of free drugs. 29 (29%) of the patients came to know about the facility by other TB patients who had received treatment from this facility. 19 (19%) of the patients came to know about this facility from their friends who were well-acquainted with this facility and the provision of free drugs. The response of 15 (15%) of the patients was not clear.

Perception Regarding Convenience Of Operating Hours: When asked about the convenience of schedule of the consultation and timings of the availability of drugs at the facility, 89 patients (89%) demonstrated that they were well

aware of the schedule and the working hours and they were satisfied.

Access To Health Services By Respondents: Majority of the respondents preferred government hospitals for seeking treatment for tuberculosis. This facility (Allied Hospital) is a tertiary health care centre where patients from far flung areas are being referred for better care. During the study, the distance of the patients' dwellings from the health facility was questioned. It was interesting to note that 55 patients (55%) were coming from more than 5 kilometers away from the hospital, while 24 patients (24%) were coming from more than 2-5 kilometers, and only 20 (20%) were residing within less than 2 kilometers from the health facility. As many textile mills and power looms are located in the close vicinity of this health facility, it is presumptive that tuberculosis is much more prevalent in this area due to several factors. Some of these factors include poor living conditions, overcrowding, small houses and unhealthy working environment.

Rating Of Level Of Satisfaction Of Respondent Regarding The Health Facility Based On Current Visit: Amongst those who do not prefer Government hospitals, the chief reasons put forth were – Distance from residence, non-availability of medicine and unfriendly behavior of the staff. 88% of the patients were satisfied with the provision of drugs and other services offered at the health facility. Some of the patients (12%) were not satisfied, due to various reasons like attitude of the health personnel, non-availability of drugs, provision of drugs on monthly basis, wearisome registration process, long waiting periods and unsatisfactory investigative procedures e.g. heavy rush in x-ray departments and so forth.

Symptoms due to Which The Patients First Came To The Health Facility: In our study, it was observed that only 3% of the patients came to the health facility with a complaint of one symptom that was persistent cough. 7% of the patients came to the health facility because they were suffering from fever. 2% of the patients came to the health facility due to the weight loss. Majority of the patients, 88% attended the health facility with multiple symptoms due to the advance stage of the disease. These included low grade fever, night sweating, persistent cough, etc.

Investigative Measures Done In The Facility: Majority of the of the patients 62% had to undergo multiple tests for the diagnosis of tuberculosis like X-ray chest, Blood Complete Examination, Sputum Examination, FNAC etc., as these facilities were not available at the gross root level i.e. Health Facilities in rural areas. FNAC tests was done on 27% of the patients because they had been examined by the general practitioners and were referred by them. The remaining 11% patients were diagnosed on the basis of sputum examination being positive. Being a tertiary care hospital, almost all the investigative procedures were available in the hospital.

Registration At The Facility and Provision of Drugs: Out of the 100 patients, 85 were registered with T.B. and were receiving drugs from the T B DOTS outlet just adjacent to the chest OPD while the 15 patients (15%) were not registered and they were receiving drugs from the outdoor dispensary of the hospital where A.T.T. drugs were being provided by the hospital pharmacy. These patients were being examined and treated by other outdoor departments. Although this group of the patients were receiving drugs from the hospital pharmacy but they were highly un-satisfied due to reasons as the drugs issued to them were for 7 days only and many a times the drugs were not out of stock, thereby increasing the probability of drug resistance. Unfortunately, these patients were not aware of the T B DOTS facility being present in the same OPD of the hospital.

Knowledge About Duration Of Treatment: A large number of patients 92% had been receiving treatment for the last 8 months or less. Only 8% patients had been receiving the treatment for a period between 8 and 12 months. These results are indicative of the strict adherence of the patients to the drug therapy and success of the T B DOTS program.

Drugs Affordability: As regards the socioeconomic status in terms of the affordability of the A.T.T. drugs from the market, only 12% of the patients could afford to purchase the drugs. The rest of the 88% were unable to buy their drugs on account of the low monthly income. Instead, when inquired, they mentioned that they were getting their drugs from other sources, such as NGOs and free health centers.

Continuity Of Treatment (In Case Of Non-availability Of Drugs At the Facility): Majority of the respondents strongly agreed other statement that completing full course of TB treatment is essential. They were also quite aware that the disease becomes untreatableonce a patients start taking medicines haphazardly. A small minority of the patients 5(5%) did not know the importance of the strict compliance regarding the intake of A.T.T. drugs regularly and without any break. When asked, they said that they might discontinue their intake of drugs if they were not able to get free drugs from any source.

Treatment Compliance: Study showed that following the advice of health care provider of the facility regarding the strict and regular intake of drugs, a majority 89 (89%) of the patients followed the advice strictly while the others, (probably due to lack of sufficient knowledge about the importance of regular treatment of T.B.) were not observing a strict compliance.

Table A: Frequency distribution of respondents by their Socio demographic Characteristics

Socioeconomic Characteristics of Patients	**Male**	**Female**
Gender	37(37%)	63(63%)
Age group in years		
8 – 20	10(10%)	32(32%)
21 – 40	17(17%)	9(9%)
41 – 60 and above	10(10%)	22(22%)
Marital status		
Married	10(10%)	28(28%)
Unmarried	7(7%)	55(55%)
Education		
Illiterate	7(7%)	12(12%)
Under matric	20(20%)	39(39%)
Matric	10(10%)	10(10%)
Intermediate	-	
Monthly family income	**Frequency**	**%age**
Less than 5000 rupees	27	27%
5000 – 10000 rupees	62	62%
More than 10000 rupees	11	11%

Health Education And Control Of The Spread Of T.B.: Although more than one third of the patients identified cough of an infected person as a mode of spread of tuberculosis. A fairly high percentage also felt that tuberculosisis spread by sharing utensils like dishes and clothing fan infected person. Knowledge of the patients regarding the preventive aspect of the spread of tuberculosis to the people in close contact with them (e.g. family members, friends, colleagues at the work spaces etc.) was assessed in the survey. Most of the patients (89%) demonstrated up to the mark awareness and told that they were observing all the preventive measures to avoid the spread of disease. These included good personal hygiene, caution during coughing, avoiding spitting everywhere and

regular treatment and follow up checks. The other 11% were not aware of such measures, either due to lack of communication with the health care personnel or their own negligence.

Improvement in The Course Of Disease: There was a direct impact of the regular provision of drugs from the health facility and the regular intake of A.T.T. drugs by the patients on the results of the treatment. The study showed that 89% patients' health had improved ever since they had started the treatment. The other 11% patients mentioned their health had not improved, the possible reasons being irregularity in taking the drugs or the non availability of A.T.T. drugs at the facility.

Knowledge Of Free Drug Supply: Out of 100 patients88% of the patients who were being treated had knowledge about the provision of the drugs without any expenses from this facility. 12% of the patients were not aware that they were entitled to free drugs after registration at the facility after launching of the TB DOTS Programme in Allied Hospital.

Fig. A

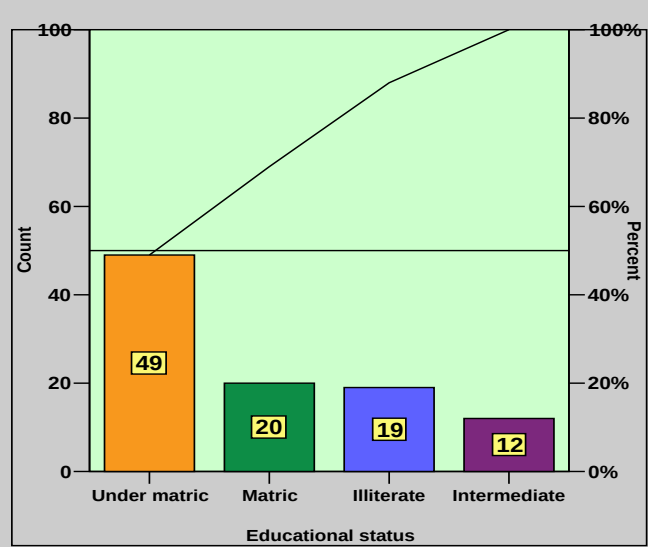
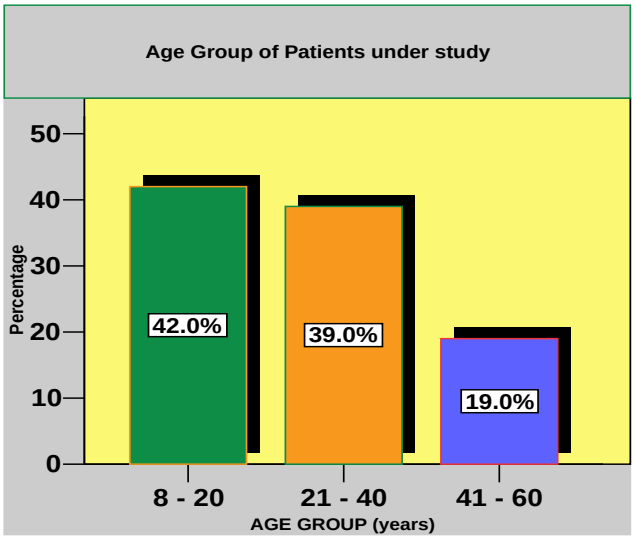


Fig B



RECOMMENDATIONS

1. Supply of anti tuberculous medicines should be ensured for TB patients.
2. Test for tuberculosis should provided free of cost.
3. For awareness of tuberculosis all resources should be used. Instead of having diagrammatic pictures, real picture taken in real situation can have much better effect on communities and patients.
4. Public awareness raising programmes should be arranged using electronic and print media. These programmes should particularly address the myths and various misconceptions regarding transmission of TB and its cure.
5. Health education booths should be set up in the waiting rooms, which provide counseling and advisory sessions on TB and distribute leaflets and pamphlets on various issues related to tuberculosis.
6. Billboards and posters containing health messages should be displayed at various places of hospitals.
7. As patients of tuberculosis are the end users of OPD, their suggestions should also be taken into account, before taking any action.

REFERENCES

1. World Health Organization. Global tuberculosis control: surveillance, planning, finances. WHO report 2005. Document WHO/HTM/TB/2005.349.Geneva,2005.
2. Tuberculosis Control and Medical School- Report of a WHO workshop Rome, Italy, 29-31 Oct 2007 WHO/TB/98.236, 2008; Geneva, Switzerland.
3. Khan J, Islam N, Ajanee N, Jafri W. Drug resistance of Mycobacterium tuberculosis in Karachi, Pakistan. Tropical Doctor. 1993; 23: 13-14.
4. Marsh D ,Hashim R, Hassany F, Hussain N, Iqbal Z, Irfanullah A, et al. Front-line management of pulmonary tuberculosis: ananalysis of tuberculosis and treatment practicesinurbanSindh,Pakistan.TuberLungDis2006;77:86-92.
5. DeMuynck A, Siddiqi S, Ghaffar A ,Sadiq H. Tuberculosis controlin Pakistan: critical analysis of its implementation. J Pak Med Assoc 2001;51:41-7.
6. Khan J, Malik A, Hussain H, Ali NK, Akbani F, Hussain SJ, et al. Tuberculosis diagnosis and treatment practices of private physicians in Karachi, Pakistan. East Mediterr Health J 2003;9:769-75.
7. Rizvi N,Hussain M.Survey of knowledge about tuberculosis amongstfamilyphysicians.JPakMedAssoc2001;51:333-7.
8. Khan JA, Irfan M, Zaki A, Beg M, RizviN. Knowledge, Attitude and Misconception regarding Ttuberculosis in Pakistani Patients.JPMA2006;56:211.
9. World Health Organization. Global Tuberculosis ControlRreport2003; profiles of high-burden countries. WHO.2003.
10. Hoa P, Thorson AE, Long H, Diwan K. Knowledge of tuberculosis and associated health-seeking behaviour among rural Vietnamese adults with a cough for at least three weeks. Scand J Public Health 2003;Suppl 62:59-65.
11. Khan A, Walley J, Newell J, Imdad N. Tuberculosis in Pakistan. Socio-Cultural Constraints and opportunities in treatment. SocSci Med 2000;25:389-99.
12. Shehzadi R, Irfan M, Zohra T, Khan J A, ussain SF. Knowledge regarding management of tuberculosis among general practitioners in northern areas of Pakistan. J Pak Med Assoc 2005;55:174-6.