

Health-care seeking behavior among pulmonary tuberculosis patients in Salahadin Governorate

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Abstract

Background and objectives: The burden of tuberculosis on public health is staggering and has become of growing concern to stakeholders in recent times worldwide. Patients delay in seeking care increases the transmission of pulmonary tuberculosis and hence the burden of the disease. The aim of this study was to investigate the patterns and determinants of patients delay in seeking treatment among pulmonary tuberculosis cases attending the chest and respiratory consultation center in Salahadin governorate.

Methods: This descriptive cross-sectional study included 50 tuberculosis cases attending the chest and respiratory consultation center in Salahadin governorate. A questionnaire was used to collect the data that by face to face interview with the patient including 25 questions divided into two sections of identification information, socio-demographic characteristics and health seeking history.

Results: The median patient delay was 3.9 weeks. The median health system delay was 3.0 weeks. The median total delay was 8.9 weeks. The highest percentage of patients' first health seeking places was the private clinic 72%.

Conclusions: The major cause of delay in seeking treatment among pulmonary tuberculosis cases was attributed to patient and the health system. Decentralization of the treatment is fundamental for earlier diagnosis. Involvement of private sectors in the treatment program will result in a decrease in the delay of tuberculosis patients.

Key words: tuberculosis, healthcare seeking behavior, DOTS.

Introduction

Tuberculosis (TB) is the second leading cause of mortality worldwide.¹ Delay in diagnosis is an important factor in the spread of the disease and a patient's poor outcome.²⁻⁴ Delay in case detection and reporting could be attributed to the health system⁵⁻⁷ and/or patient factors.⁸⁻¹⁰ Studies on delay in case detection were performed mainly on diagnosed cases, 9-11 and none of them have been performed on undiagnosed cases. These studies are particularly needed to guide the process of TB elimination. In 2003, Directly Observed

Treatment Short Course (DOTS) programs successfully treated 84% of all registered, new, smear-positive patients, but it detected only 28% of the estimated tuberculosis cases in the world.¹² Therefore, the target of 70% case detection might not be reached until 2013 unless interventions are made that are able to increase the case-detection rate. Early diagnosis and prompt effective therapy form the key elements of the tuberculosis control program. Delay in diagnosis results in increased infectivity

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in the community, and it is estimated that an untreated smear-positive patient can infect, on average, 10 contacts annually and more than 20 during the natural history of the disease until death.¹³ Several factors have been identified as influencing delay in diagnosis and start of treatment, including the individual's perception of disease, socioeconomic level, stigma, extent of awareness about the disease, the severity of the disease, distance between the patient's residence and health services, and expertise of the health personnel.¹⁴ Such delay may occur at the level of the patient (patient delay) or at the level of the health system (system delay). Factors which contribute to patient or system delay are numerous, and it is important to identify and address these factors to devise strategies for the National

Patient and method

This is a descriptive cross-sectional study done in Salahadin governorate, investigating 50 pulmonary TB cases from January to November 2008. All newly diagnosed pulmonary tuberculosis cases attending the chest and respiratory consultation center are included in the study; exclusion criteria included patients <15 years old, extra

1. Total delay: period from the onset of the symptoms to the time of presentation at the DOTS center.
2. Patients' delay: is the period from the onset of the symptoms to the time of contact of any health facility.
3. Doctors' /health system delay: is the time of first contact of a health facility by the patient to the presentation at DOTS facility in our study.

Results

In this study, data from 50 patients are collected. Males represented (56%) of patients, with male to female ratio of 1.2:1. Majority of the patients were

Tuberculosis Control Program (NTP).¹⁴ Delays in case finding are common and have been studied in many countries including developed or developing and low or high prevalence.¹⁵⁻¹⁸ Reported determinants of delay include being part of specific patient groups (i.e., women, rural vs. urban residents, nationality) or the availability of and accessibility to health services.¹⁶⁻¹⁸ This study aimed to explore the perceptions of Tuberculosis (TB), and treatment seeking behavior, among patients attending the chest and respiratory consultation center in Salahadin Governorate and to assess the delay in care provision and its association with various socio-demographic characteristics.

pulmonary TB, resistant pulmonary TB, and re-treatment cases. Data was collected by direct interview with the patient using a questionnaire formulated by the researchers, includes health seeking history and socio-demographic characteristics. Three types of delay were defined¹⁶.

housewives (40%) and (50%) of them from primary school education, (56%) from rural area, not travelled from another province (72%), and with no contact

history (56%), as shown in Table 1. Table (1): General characteristics of patients studied, n=50. 3.2 Indication of colonoscopy of study population: The

most common indication of colonoscopy was bleeding per rectum which was found in 72 patient 36% Fig 6:

Table (1): General characteristics of patients studied, n=50.

Characteristics		Frequency	Percentage
Age	25>	16	32
	25-50	22	44
	50<	12	24
Sex	Male	28	56
	Female	22	44
Occupation	laborers	13	26
	Student	2	4
	Housewives	20	40
	Others	15	30
Education	Illiterate	11	22
	Primary	25	50
	Secondary	11	22
	High education	3	6
Residence	Rural	28	56
	Urban	22	44
If the family travelled from another province	Yes	12	24
	No	38	76
Contact history	Yes	22	44
	No	28	56
If she/he arrested	Yes	6	12
	No	44	88

Table 2 shows comparison between total delay of >3 weeks and <3 weeks, the most frequent total delay of >3 weeks was among male (40%), between 25-50 years

old (34%), housewives (34%) and have primary school education (40%) as shown in Table 2.

Table (2): Patients with total delay by characteristics.

Characteristics		Total delay (<3 wk)		Total delay (>3wk)	
		Frequency	Percent (n=50)	Frequency	Percent (n=50)
Age	25>	4	8	12	24
	25-50	5	10	17	34
	50<	2	4	10	20
Sex	Male	8	16	20	40
	Female	3	6	19	38
Occupation	Laborers	2	4	11	22
	Student	1	2	1	2
	Housewives	3	6	17	34
	Others	5	10	10	20
Education	Illiterate	2	4	9	18
	Primary	5	10	20	40
	Secondary	3	6	8	16
	High Education	1	2	2	4
Residence	Rural	6	12	22	44
	Urban	5	10	17	34
If the family travelled from another province	Yes	1	2	11	22
	No	10	20	28	56
Contact history	Yes	3	6	19	38
	No	8	16	20	40
First contact	PHCC	1	2	2	4
	Hospital	2	4	6	12
	Private clinic	7	14	29	58
	Traditional healer		0	2	4
	Laboratory	1	2		0
If she/he arrested	Yes	3	6	3	6
	No	8	16	36	72

Table 3 shows comparison among patient, health system, and total delay. The total delays constitute the most frequent delays of all characteristics compared with patient and health system

delay. Of patients with total delay more than 3 weeks from the starting symptoms to the diagnosis according to patient characteristics, the most frequent total delay of >3 weeks was among male

(40%), between 25- 50 years old (34%), have primary school education (40%), from rural (44%), family not travelled from another place (56%) and with no contact history (40%).

Table (3): Patient, health system and total delay of patients by patient characteristics.

		Patient delay Weeks	Health system delay Weeks	Total delay Weeks
Characteristics		(Median (Range	(Median(Range	(Median(Range
Age	25>	(1-24)3.5	(0-16)3	(4-28)7
	25-50	(1-10)3	(0-23)3	(4-28)6
	50<	(1-43)4	(0-88)2.5	(4-44)8.5
Sex	Male	(1-20)3.5	(0-88)3	(4-28)7
	Female	(1-43)4	(0-16)2	(4-44)6
Occupation	Laborer	(1-24)3	(0-23)3	(4-28)8
	Student	Single patient		
	Housewives	(1-43)4	(0-16)3	(4-44)6
	Others	(1-16)4	(0-88)5.5	(4-24)9
Education	Illiterate	(4-43)4	(0-88)4	(4-44)20
	Primary	(1-10)2.5	(1-15)3	(4-20)5
	Secondary	(1-8)4	(0-23)3	(4-28)5
	High education	(1-24)12	(0-3)1.5	(4-24)14
Residence	Rural	(1-43)4	(0-88)3	(4-44)6
	Urban	(1-24)3	(0-23)3	(4-28)16
Is the family travelled from another ?province	Yes	(1-20)4	(0-10)4	(4-24)8
	No	(1-43)3.5	(0-88)3	(4-44)6
Contact history	Yes	(1-24)4	(0-23)3	(4-28)8
	No	(1-43)3	(0-88)3	(4-44)6
If she /he arrested	Yes	(1-43)5	(1-23)3	(4-44)28
	No	(1-24)3.5	(0-88)3	(4-28)6

Table 4 shows that the most frequent and least frequent patients' first health seeking places were private clinic (72%) and laboratories were the least (8%).

Table (4): Patients' first health seeking places.

First health contact	Frequency	Percent
Private clinic	36	72
Hospital	8	16

PHCC	3	6
Traditional healer	2	4
Laboratory	1	2
Total	50	100

Table 5 shows that most of the tuberculosis patients had contacted with a medical person twice before diagnosis (26%).

Table(5): Medical contacts until diagnosis

Medical contact number	Frequency	Percent
1	9	18
2	13	26
3	12	24
4	12	24
6	1	2
7	2	4
8	1	2
Total	50	100

Discussion

This study has identified that the total delay (78%) is the most frequent delay compared with patient and health system delay. In this study, the median delay from the onset of symptoms to the time of presentation at the DOTS center was 8.9 weeks which is above the acceptable 3-4 weeks¹⁹. The study showed that patient delay (7 days) was less than the health facility delay (21 days). This means that the Iraqi patients were lost in moving through more than one private and / or public health facility until reach the DOTs facility due to very long health system delay. This problem wasn't found in other countries in which patient delay was found to be the major component of delay in countries such as the United States of America (25 days patient delay vs. 6 days health care system delay) and Tanzania (120 days patient delays. 15 days health care system delay).^{16, 20} The patient delay may be related to the stigma of the

disease in our country and the limitation of the people movements due to the civil wars in Iraq that make patients' movements difficult, especially if we know that DOTs facilities are only found in city centers. Centralization of the diagnosis, registration of treatment to the respiratory and chest consultation center make patients shift to the private health facilities which are not included in DOTs program. Lack of education can also play a role in delaying health seeking. Although our data was not adequate (due to small sample size) to provide a significant variation between the education levels, the fact that most of the studied patients had an equivalent or less than the primary school education, reflects that TB is a disease of illiterate and poor communities. Similar findings were reported in Gambia.²¹ These findings may have some unpleasant social consequences such as cultivation of stigma to the

disease.²²⁻²³ Our findings also showed that traditional practitioners and drug sellers, to some extent were consulted by the TB patients for treatment during the onset of TB symptoms. These might act as contributing factors to delays among TB patients to seek early diagnosis and treatment at health facilities. We have found that patients delayed seeking health care until the symptoms became severe, and majority of the patient's first contact with health facility was the private doctor, very few came directly to DOTS. This finding is similar to a study done in Pakistan.²⁴ In our study, the total delay from onset of symptoms to the time of presentation at a DOTS facility was 62 days, which is lower than a study done in Karachi, Pakistan where a total delay of 97 days was reported.²⁴ Many patients in this study made several visits to the care-providers before reaching the TB center. Private Doctors for most of the patients (72)

were their first contact with health system, which indicates either difficulty in reaching the government health system or easy accessing to private doctors, as no family physician health system is established in Iraq to facilitate patients' contact to the health system. Reports from the region showed that TB suspects seek care initially at the private sector where they could be diagnosed or undiagnosed, and if diagnosed they could be treated or inadequately treated. In case of undiagnosis and inadequate treatment, they will continue to transmit infection in the community. Undetected cases will continue seeking care at other healthcare providers, such as other private or public providers, because of persistence of symptoms and increasing disease severity in some instances. Finally, they reach the national tuberculosis control program where they could be finally diagnosed and adequately treated.¹⁴

Limitations of the Study

The main limitation of this study was inability to cover the attitude of patients toward the TB in terms of social stigma, and economic status.

Conclusion

There is a delay both from the patient as well as the health system in treating TB. Females delayed longer as compared to males. Centralization of the treatment was

an obstacle in front of patient diagnosis earlier. Lack of private sector involvement in the DOTS program, makes delay in patient diagnosis.

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