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**Delay of Health Care Seeking Among TB patients in Kassala State
Kassala Hospital -Sudan (2013)**

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Abstract:

Background: Delay of health seeking care among tuberculous (TB) patients is a common problem that might contribute to the high burden of TB and increase the cost of care for patients, families and public health system. Little is known about delays before the start of TB therapy in eastern Sudan. This study aimed to determine the factors associated with delay care seeking behavior in TB cases.

Methods: A cross-sectional descriptive study was held at chest department, Kassala Teaching Hospital, during April to June 2013. TB patients were interviewed using pretested questionnaire that was filled by trained medical students to gather information about their knowledge of TB, and factors associated with delay of care seeking. Collected data were analyzed using SPSS for windows version 16.0.

Results: Of 221 TB cases, 199 (90%) of them looked for treatment after setting of the most TB symptoms in period greater than three weeks. 155 (70.1%) looked for treatment guided by their relatives or friends, or due to un-response to self-medication. 150 (67.9%), and 164 (74.2%) came to hospital because they thought that their treatment should be at hospital. They mentioned different reasons associated with delay of seeking care as self-medication 119 (53.8), far distance to hospital 119 (53.8%), transport difficulties 113 (51.1%) and stigma 111 (50.2%).

Introduction:

Tuberculosis (TB) is a major health problem worldwide. It is still a major cause of morbidity and mortality, and a major public health concern in Sudan (Khalid et al 2013). According to the WHO, Sudan carries 15% of the TB burden in the Eastern Mediterranean Region⁽¹⁾.

TB is an infectious disease and the main strategy of its control based on rapid identification of cases and treatment, this strategy depends on patients and health providers. Delay in any part of the process of health seeking-care will increase chances of disease spreading. Untreated TB cases, even those with smear-negative has a contribution in the transmission of TB⁽²⁾. Therefore early detection of TB cases and prompt treatment are the most effective measures to control TB disease. Patients delay have been associated with different factors such as inadequate knowledge about tuberculosis, being married and less educated, and long distances to health services, cost of travelling and financial factors^(3,4,5,6). This study aimed to determine the factors associated with delay care seeking behavior among TB patients in Kassala.

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Methodology:

Study design:

Descriptive cross-sectional study was conducted at the chest department, Kassala Teaching hospital during the period from April to July 2013.

Study area:

Kassala State, located in east of Sudan, is one of the high TB burden states in the country. Kassala Teaching Hospital is the biggest one in kassala State and most of the TB patients are treated in the chest department. This study was held to determine the factors associated with delay care seeking behavior in TB cases.

Data collection techniques and tools:

Data was collected during April through July 2013 by trained medical students. The patients were interviewed using pretested questionnaire. The questionnaire included information about patients' socio-demographic characteristics, knowledge about the disease and selected factors that might affect delay in receiving TB care. A verbal consent was taken from the respondents. Ethical clearance was obtained from the Ministry of Health. Objectives, steps and expected outcomes of the research were explained to the participants as well as their right to withdraw from the study at any time without any consequences for their current care. Confidentiality of the data obtained were maintained before and during the study

Data analysis:

Data analysis was performed using *SPSS* for Windows, version (16.0). Descriptive statistics were used, such as frequency, mean and standard deviation (SD), median, minimum and maximum. Comparisons between groups were made using the chi-squared test. P value < 0.05 was considered significant.

Results:

General Characteristics: A total of 221 of TB patients were diagnosed at the chest department, as pulmonary TB 159 (71.9%) and extra-pulmonary TB 62 (28.1%). Of the total patients, 131 (59.3%) were males and 90 (40.7%) were females, their age ranged from 13 to 95 years with mean 40.45 and standard deviation 18.75, 126 (57%) were urbanized, 71 (32.1%) were married, 165 (74.7%) belonged to beja tribe (Hadandwa and beni amir), 70 (31.8%) had a formal education. 125 (56.5%) were daily workers and housewives, 111 (50.2%) were dependant on others for financial support. There was no significant difference between and not delayed patients in terms of gender, ethnicity, education, and occupation ($P > .05$)

Clinical presentation: Most of the patients had cough 164 (74.2%), fever 151 (68.3%), loss of weight 133 (60.2%). The symptoms duration varied from one week to more than 52 weeks with median 12 weeks and mean 25.67 weeks.

Patients' knowledge about TB:

69 (31.2%) thought of TB when visited hospital, 124 (56.1%) had poor knowledge of TB. As shown in table (1): poor knowledge was reported among the patients regarding the

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infectivity of the disease, causative agent, period of treatment, although they understood that it is curable disease. Also they were unaware of family prevention from infection. There is no significant association between delayed and not delayed patients regarding their knowledge about TB ($P > .05$).

Table (1): Patients knowledge about Tuberculosis

Item	Frequency	%
TB is infectious disease	92	42.6
TB is airborne disease	74	34.3
It is curable disease	160	74.1
Period of treatment	84	38.9
Family prevention	94	43.5

Reasons for visiting hospital:

The patients mentioned different reasons for looking for the treatment at chest department as advised by friends/ relatives 155 (70.1%), convinced that their treatment should be at the department 164 (74.2%), and un-response to self-medication 150 (67.9%). Table (2)

Table (2): Reasons for visiting hospital

Reason	Frequency	%
Advised by friends / relatives	155	70.1
Un-response to self-medication	150	67.9
Understand the treatment should be at hospital	164	74.2

Reasons of delay seeking- care:

Most of the patient looking for treatment after setting most of TB symptoms in period greater than 3 weeks 199 (90%). The reasons why they were not looking early for the treatment in the hospital included; self-medication, poverty, long distance to reach hospital, difficulties of transports, stigma and unawareness of treatment ignorance, table (3)

Table (3): Reasons of delay seeking- care

Reason	Frequency	%
Self medication	116	53.7
Long distance to reach hospital	119	55.1
Difficulties of transport	113	52.3
Stigma	111	51.4
Ignorance of treatment	108	50.0

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Association of delay with socio-demographic data

No significant association between delay in seeking care and socio-demographic data including: gender, age, marital status, ethnicity, and education and occupation ($p > .05$)

Discussion:

In this study most of the patients had delayed seeking care more than three weeks. The success of a tuberculosis control program relies on early case detection and high treatment compliance. Delay in the diagnosis and/or treatment of tuberculosis worsens morbidity and mortality, and increases tuberculosis transmission. The acceptable time interval of delay 3 weeks for suspected TB cases ⁽¹⁾. This study showed that patients looked for treatment after setting most of TB symptoms (cough, fever, loss of weight) in periods greater than 3 weeks. The same result was reported in studies conducted in different African countries ^(3,8,10,11,12). However the study conducted in India showed the median delay among TB cases was 19 days ⁽¹³⁾. Although the patients understood the curability of TB, they showed poor knowledge regarding its contagious nature, and the causative agent. Same finding was reported in Mozambique ⁽¹²⁾ and Malawi ⁽¹⁴⁾. Poor knowledge and ignorance of TB symptoms will contribute in the continuous transmission of disease that affect the production and increase the burden to health and the community. Delay of health –seeking care among the respondents was not associated with the patients socio-demographic characteristics (age, sex, marital status, ethnicity and occupation..). Lack of association was in agreement with the study conducted in Ethiopia, ⁽³⁾, Nepal ⁽¹⁵⁾, and Zimbabwe ⁽¹⁶⁾, unlike the finding of the study conducted in India ⁽¹³⁾ and Zambia ⁽⁸⁾.

The study determined the contribution of Self medication to patients delay, which is uncommon among the patients in Zimbabwe ⁽¹⁶⁾. this may associate with low knowledge and low perceived susceptibility of TB infection. Same finding was reported Tanzania (Said 2017), Georgia ⁽¹⁸⁾.

As reported by Adenager et al , our study showed the association of TB delay- seeking care with distance and stigma. TB-associated stigma may have played an important role in hindering patients from seeking early health care due to fear of being diagnosed with TB, and this will help increasing the transmission of disease.

Conclusion and Recommendation:

The study showed the contribution of poor knowledge of TB, self medication prior diagnosis of disease, long distance towards health facilities and stigma to delay of health seeking care. Implementation of health education will Increase the community awareness of TB signs and symptoms and could further reduce diagnostic delays and interrupt TB transmission. Encourage patients to look for early diagnosis.

Acknowledgement

We are grateful To TB patient for their cooperation and enrolment in this study, the staff members of chest department, Kassala Teaching hospital for their cooperation, and also our thanks to medical students from University of Kassala who aided in the collection of data.

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Reference:

1. WHO (2008): Tuberculosis; Global Tuberculosis control report 2008. Fact sheet N 104.
2. Behr MA, Warren SA, Salamon H, et al. Transmission of Mycobacterium tuberculosis from patients smear negative for acid-fast bacilli. *Lancet* 1999;353:444–9.
3. Demissie M, Lindtjorn B, Berhane Y. Patient and health service delay in the diagnosis of pulmonary tuberculosis in Ethiopia. *BMC Public Health* 2002; 2(1): 23.
4. Madebo T, Lindtjorn B. Delay in Treatment of pulmonary Tuberculosis: An analysis of symptom duration among Ethiopia patients. *Med Gen Med* 1999; 18: E6.
5. Abebe G, Deribew A, Apers L, Woldemichael K, Shiffa J, Tesfaye, M, et al. (2010) Knowledge, Health Seeking Behavior and Perceived Stigma towards Tuberculosis among Tuberculosis Suspects in a Rural Community in Southwest Ethiopia. *PLoS ONE* 5(10): e13339. doi:10.1371/journal.pone.0013339 9:196 doi:10.1186/1472-6963-9-196.
6. Zhang T., Liu X., Bromley H., & Tang S. perceptions of tuberculosis and health seeking behavior in rural Inner Mongolia, China. *Elsevier health policy* 2007; (81): 155-165.
7. Needham DM, Foster SD, Tomlinson G, Godfrey-Faussett P. Socio-economic, gender and health services factors affecting diagnostic delay for tuberculosis patients in urban Zambia. *Trop Med Int Health* 2001; 6(4): 256-9.
8. Mengiste M Mesfin¹, Tesfay W Tasew², Israel G Tareke², Yohannes T Kifle ², Witten H Karen² and Madeley J Richard. Delays and care seeking behavior among tuberculosis patients in Tigray of northern Ethiopia. *Ethiop.J.Health Dev.* 2005;19:7-12].
9. Meintjes G, Schoeman H, Morroni C, Wilson D, Maartens G: Patient and provider delay in tuberculosis suspects from communities with a high HIV prevalence in South Africa: a cross-sectional study. *BMC Infect Dis* 2008, 8:72.
10. Hussen A, Biadgilign S, Tessema F, Mohammed S, Deribe K, and Deribew A. Treatment delay among pulmonary tuberculosis patients in pastoralist communities in Bale Zone, Southeast Ethiopia. *BMC Res Notes.* 2012; 5: 320.
11. Saifodine A, Gudo PS, Sidat M and Black J (2013) Patient and health system delay among patients with pulmonary tuberculosis in Beira city, Mozambique. *BMC Public Health* 2013, 13:559 <http://www.biomedcentral.com/1471-2458/13/559>
12. Nimbarte BS , Wagh V , Deepak Selokar D. Health seeking behaviour among pulmonary tuberculosis patients in rural part of central India. *Int J Biol Med Res.* 2011; 2(1): 394-397.
13. Peter Nyasulu, Faith Phiri, Simon Sikwese, Tobias Chirwa, Isaac Singini, Hastings T. Banda, Rhoda Banda, Tichaona Mhembere, Henry Chimbali, Bagrey Ngwira, Alister C. Munthali (2016). Factors Influencing Delayed Health Care Seeking Among Pulmonary Tuberculosis Suspects in Rural Communities in Ntcheu District, Malawi. *Qualitative health research* , Vol 26, Issue 9, 2016
14. Yamassaki-Nakagawa M, Ozasa K, Yamada N, et al. Gender difference in delays to diagnosis and health care seeking behaviour in a rural area of Nepal. *Int JTubercLungDis.* 2001; 5:24–31.

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15. Kudakwashe C Takarinda, Anthony D Harries, Barnet Nyathi, Mkhokheli Ngwenya, Tsitsi Mutasa-Apollo, and Charles Sandy. Tuberculosis treatment delays and associated factors within the Zimbabwe national tuberculosis programme. *BMC Public Health*. 2015; 15: 29.
16. A. S. Rabin,* G. Kuchukhidze,† E. Sanikidze,† R. R. Kempker,* and H. M. Blumberg (2013). Prescribed and self-medication use increase delays in diagnosis of tuberculosis in the country of Georgia. *Int J Tuberc Lung Dis*. 2013 Feb; 17(2): 214–220.
17. Getinet Shewaseged Adenager,¹ Fessahaye Alemseged,¹ Henok Asefa,¹ and Amanuel Tesfay Gebremedhin². Factors Associated with Treatment Delay among Pulmonary Tuberculosis Patients in Public and Private Health Facilities in Addis Ababa, Ethiopia. *Tuberculosis Research and Treatment Volume 2017*, Article ID 5120841, 9 pages. <https://doi.org/10.1155/2017/5120841>
18. Report 2011: *Global Tuberculosis Control*
19. Ward J, Siskind V, Konstantinos A: Patient and health care system delays in Queensland tuberculosis patients, 1985–1998. *Int J Tuberc Lung Dis* 2001, 5:1021–1027.
20. Abuchahama Saifodine A, Gudo PS, Sidat M and James Black J. Patient and health system delay among patients with pulmonary tuberculosis in Beira city, Mozambique. *BMC Public Health* 2013, 13:559 . <http://www.biomedcentral.com/1471-2458/13/559>