REASONS OF ABANDONMENT TREATMENT IN PATIENTS WITH LEISHMANIASIS

Şark çıbanı vakalarında tedavi terk durumu ve nedenleri

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Abstract

The goals of this study that examined patients with Cutaneous Leishmaniasis (CL) who were diagnosed and treated at the Sanliurfa Cutaneous Leishmaniasis Diagnosis and Treatment Center (SCLDTC), were to determine the frequency of treatment discontinuation and the reasons for discontinuation. This was a descriptive study that included individuals who visited the SCLDTC for diagnosis and treatment in 2020 and were diagnosed with CL. The study's data collection phase took place between July 1, 2020 and December 31, 2020. The study comprised 370 patients who were diagnosed with CL and under treatment as of January 1, 2020. It was found that 187 of these patients discontinued treatment. The frequency of treatment discontinuation was 50.5%. Of those who discontinued treatment, 50.8% were women. It was determined that 3.7% of those who discontinued treatment did not speak Turkish, and 41.1% had not received formal education. Among the patients who discontinued treatment, 21.4% had no job, and 83.9% belonged to the lower socioeconomic status and unemployed group. Of those who discontinued treatment, 54.6% stopped before completing the first course, while 39,0% did not attend the follow-up examination after completing the first course. In cases of cutaneous leishmaniasis, the most common reasons for discontinuing treatment were believing that they do not require treatment (28.9%), disregarding the disease (27.3%), and a lack of medication in SCLDTC (26.7%). In the present study, the most common reasons for discontinuing treatment were a lack of belief in the necessity for treatment, disregarding the disease, and a shortage of medication. Patients' and society's knowledge and awareness of CL should be increased, public education programs should be organized, patients admitted to SCLDTC and their relatives should be informed, and the importance of completing the treatment should be explained, especially in neighborhoods where CL cases are densely distributed.

Keywords: Cutaneous leishmaniasis, treatment discontinuation, neglected tropical diseases.

Özet

Bu çalışmanın amacı, Şanlıurfa Şark Çıbanı Tanı ve Tedavi Merkezi'nde tanısı konan ve tedaviye başlanan Kutanöz Layşmanyazis (KL) hastalarının; tedaviyi terk etme sıklığını saptamak ve tedaviyi terk etme nedenlerini belirlemektir. Araştırma tanımlayıcı tiptedir. Çalışmanın evrenini, 2020 yılında Şanlıurfa Şark Çıbanı Tanı ve Tedavi Merkezi'ne (ŞÇTTM) tanı ve tedavi amacıyla başvurup, KL tedavisine başlanan hastalar oluşturdu. Veri toplama aşaması 1 Temmuz 2020 – 31 Aralık 2020 tarihleri arasında gerçekleştirildi. Çalışmaya 1 Ocak 2020 tarihi itibariyle KL tanısı almış ve tedavi görmekte olan 370 hasta dahil edildi. Hastaların 187'sinin tedaviyi terk ettiği saptandı. Tedaviyi bırakma sıklığı %50,5 idi. Tedaviyi bırakanların %50,8'ini kadınlar oluşturdu. Tedaviyi bırakanların %3,7'sinin Türkçe bilmediği, %41,1'inin örgün eğitim almadığı saptandı. Tedaviyi bırakan hastaların %21,4'ü herhangi bir işte çalışmamaktadır ve %83,9'u alt sosyal sınıf ve işsiz grubunu oluşturmaktadır. Tedaviyi bırakanların %54,6'sı ilk kürü tamamlamadan tedaviyi bırakırken, %39,0'ı ilk kürü tamamladıktan sonra kontrol muayenesine gelmemiştir. Şark çıbanı olgularında en sık tedaviyi bırakma nedenleri; tedaviye ihtiyacı olmadığını düşünme (%28,9), önemsememe (%27,3) ve ŞÇTTM'de ilaç bulunmaması (%26,7) idi. Diğer nedenler ise COVID-19 pandemisi nedeniyle temas etmek istememe (%10,2), mevsimlik tarım işçiliği nedeniyle şehir dışında olmak (%5,9) olarak sıralandı. Bu çalışmada en sık tedaviyi bırakma nedenleri tedaviye ihtiyacı olmadığını düşünme, hastalığı önemsememe ve ilaç yetersizliği idi. KL vakalarının yoğun olduğu mahallelerde hastaların ve toplumun KL konusundaki bilgi ve farkındalığı artırılmalı, halk eğitim programları düzenlenmeli, SÇTTM'ye başvuran hastalar ve yakınları bilgilendirilmeli, tedaviyi tamamlamanın önemi anlatılmalıdır.

Anahtar kelimeler: Şark çıbanı, tedaviyi terk etme, ihmal edilmiş tropikal hastalıklar.

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Introduction

Leishmaniasis is one of the neglected tropical diseases according to the World Health Organization (1). Clinical findings show that there are three forms of the disease cutaneous leishmaniasis (CL), visceral leishmaniasis (VL), and mucocutaneous leishmaniasis. The CL form, which produces skin lesions, is the most common worldwide (2). It is a major public health issue in many countries, particularly in developing countries (3). Moreover, it is endemic in 92 countries around the world, putting an estimated 1 billion individuals at risk. Each year, more than 1 million new CL cases are diagnosed, and over 85% of new CL cases occurred in 10 countries: Afghanistan, Algeria, Brazil, Colombia, Iraq, Pakistan, Peru, the Syrian Arab Republic and Tunisia (2).

CL is endemic in several countries, including Turkey. Sanliurfa is the province, where leishmaniasis disease is seen the most in Turkey, and almost half of the cases seen annually in Turkey are seen in this province. It was revealed that the number of cases was specifically high in neighborhoods where the infrastructure was insufficient, houses were constructed with insufficient materials, there were barns, individuals frequently contacted with animals (4). In a study conducted in Sanliurfa in 2023, the number of CL cases in 2019 was found to be 843 (4).

CL is most commonly found on exposed body parts such as the head, neck, arms, and legs. Lesions are painless and may be of various types, such as acne or noduloulcerative lesions (5). CL is overlooked by society since the lesions are painless, heal spontaneously in about a year with scarring, do not cause systemic complications, and are not fatal. As a result, diagnosis and treatment are delayed (6).

The medications of choice for treating CL are pentavalent antimony compounds. These medicines are administered intralesionally or systemically (intramuscularly / intravenously) (7). Intralesional administrations are performed 1–2 times each week, making up a total of 5–8 injections (1 cure) per month, while keeping the improvement criteria in mind. If the patient does not achieve complete recovery after one course of treatment, the patient is evaluated for the second course of treatment (6).

Although CL is not fatal, delaying treatment raises the risk of transmission and morbidity (8, 9). Treatment with sufficient dose and duration accelerates recovery, reduces the chances of recurrence, and lowers the risk of scar formation and disease transmission. Vector-mediated transmission from person to person also decreases when the number of people who are the source of infection is reduced following treatment. As a result, it is vital to complete CL treatment and evaluate the factors that affect treatment continuation (10).

In order to carry out a functional prevention and control program for CL, it is essential to understand the basic knowledge, attitudes, and behaviors of people living in endemic areas in addition to understanding their beliefs regarding the disease (11, 12).

Following are the goals of this study that examined patients with CL who were diagnosed and treated at the Sanliurfa Leishmaniasis Diagnosis and Treatment Center (SCLDTC):

1. To determine the frequency of treatment discontinuation
2. To determine the reasons for treatment discontinuation

Materials and Methods

This is a descriptive study that included patients diagnosed with CL who came to SCLDTC for diagnosis and treatment in 2020. 370 patients were followed up at SCLDTC in 2020. The data collection phase of the study took place between July 1, 2020 and December 31, 2020. All 370 patients followed up at SCLDTC in 2020 were included in the study.

The study consists of 2 stages. In the first phase, the medical records of patients at SCLDTC were reviewed and 370 leishmaniasis patients who did not complete their treatment were identified. In the second phase, patients who did not complete treatment were invited to SCLDTC for medical examination and questionnaire filling. Questionnaires were filled in by face-to-face interviews with the patients who came to SCLDTC and the reason for not continuing the treatment was learned. The condition of the lesion was evaluated by physical examination. Those patients who were unable to visit SCLDTC were contacted by phone and interviewed. They were instructed to send an image of the lesion location via their mobile phones for the lesion location evaluation. While the patients agreed to send an image for evaluation of the lesion, they did not agree being used in the article content. Only local (intralesional) treatment is applied in SCLDTC. Systemic treatment is applied only in the University Hospital in the area. CL is diagnosed using the direct smear method in SCLDTC. The CL treatment protocol is described in the diagram below (Figure 1). Patients that did not complete eight doses in one course of treatment, did not show up for follow-up after completing the eight doses of treatment, did not complete eight doses in the second course even though it was required, or patients that completed the second course but did not show up for the follow-up were all defined as “patients who abandoned the treatment.”

Data was collected using the “Treatment Continuity and Affecting Factors Information Form in Leishmaniasis Patients.” There are two parts to this form. Six sociodemographic factors, such as age, gender, educational status, employment status in an income-generating job, and seasonal agricultural work (SAW) and social health insurance statuses, are included in the first section. If the patient is under the age of 18, the family’s SAW and socioeconomic statuses were filled out based on the characteristics of the patient’s parents. The second section has four questions concerning the lesion, such as the number and location of the lesion, the number of treatment doses administered, the reason for not continuing treatment, and the final status of the lesion and its site.

The SPSS 20.0 package software was used to analyze the data. The study results were evaluated using descriptive statistics such as median, minimum, maximum, and percentage. Harran University Clinical Research Ethics Committee granted ethical approval for conducting the study, with the decision dated 13.07.2020, session number 13 and number 20, and Sanliurfa Provincial Health Directorate granted institutional authority with the decision dated 05.10.2020, number 18788. Adult participants and the parents of minor participants gave their consent after being informed about the study’s purpose.

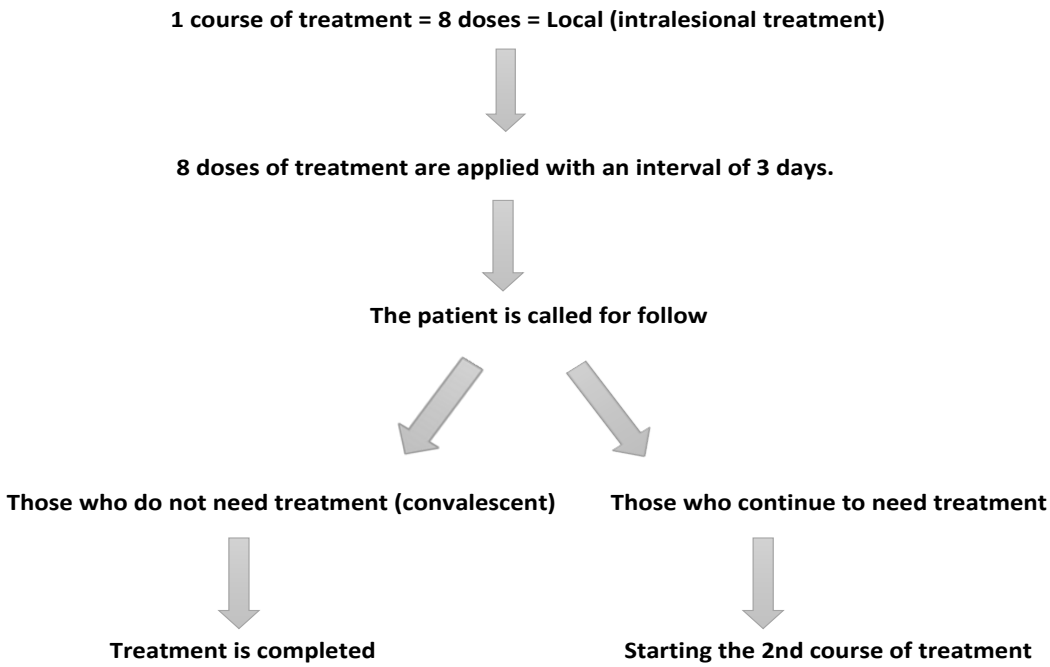

Figure 1: SCLDTC treatment protocol.

Results

It was found that 187 of the 370 patients who had been diagnosed and began treatment had dropped out. The frequency of treatment discontinuation was 50.5%.

While 54.6% of those who discontinued treatment did so before completing the first course, 39% did not return for the follow-up examination after completing the first course. In the first treatment course, the median number of doses received was six (minimum: 0, maximum: 8). The second course of treatment was initiated because the lesion did not entirely heal in 6.4% of the cases (12 patients). Of these cases, 50% (6 patients) dropped out before finishing the second course, whereas 50% (6 patients) finished the second course and dropped out at the follow-up stage (Table 1).

Women accounted for 50.8% of those who dropped out of treatment, with a median age of 12 years (minimum: 1, maximum: 78). It was found that 3.7% of those who discontinued treatment did not speak Turkish, and 41.1% patients had no formal education. The portion of 4.8% that we stated as literate refers to individuals who have not received formal education and have learned to read and write outside of school.

Furthermore, 21.4% patients who discontinued treatment had no job, and 83.9% patients belonged to a low socioeconomic status and were unemployed. Additionally, 34.8% of the families of patients who dropped out of treatment worked as seasonal agricultural workers (Table 2).

Among patients who dropped out of treatment, the median number of lesions was one (minimum: 1, maximum: 18). The rate of the leishmaniasis lesions being located on the face was 32.6%, upper extremity was 39.0%, lower extremity was 12.8%, both the upper and lower extremities was 8.6%, the face in addition to other body regions was 5.9%, and other body regions was 1.1% (Table 3).

Table 1: Distribution of CL cases as per treatment completion status.

Characteristics	Number	Percentage
Sex		
Women	95	50.8
Men	92	49.2
Age		
≤20	114	61.0
21–44	52	27.8
≥45	21	11.2
Educational level		
Illiterate	27	14.4
Literate	9	4.8
Not yet in school (children)	41	21.9
Primary school	54	28.9
Middle school	40	21.4
High school and above	16	8.6
Work status		
Yes	34	18.2
No	40	21.4
Not of working age	113	60.4
Socioeconomic status (SES)		
Middle SES	30	16.0
Lower SES	84	44.9
Unemployed	73	39.1
Seasonal agricultural worker		
Yes	65	34.8
No	122	65.2
Social security status		
Yes	91	48.7
No	96	51.3
Total	**187**	**100.0**

Table 2: Sociodemographic characteristics of patients with CL who discontinued treatment.

Status of treatment completion	Number	Percentage
Those who finished the treatment	**183**	**49.5**
Those who dropped out of treatment	**187**	**50.5**
Those who dropped out before the first course of treatment was completed	102	27.6
Those who did not show up for the follow-up appointment at the end of the first treatment course	73	19.7
Those who dropped out before the second course of treatment was completed	6	1.6
Those who did not show up for the follow-up appointment at the end of the second treatment course	6	1.6
Total	**370**	**100.0**

Table 3: The number of lesions and the distribution of the lesion site in patients with CL.

Characteristics	Number	Percentage
Number of Lesions		
One	111	59.4
≥Two	76	40.6
Lesion Site		
Face	61	32.6
Upper extremity	73	39.0
Lower extremity	24	12.8
Upper and lower extremities	16	8.6
Face and extremities	11	5.9
Body	2	1.1
Total	**187**	**100.0**

In this study, 92.0% of the lesions were examined using photographs, whereas 8.0% were examined physically. After the state of the lesions was assessed, it was determined that 12.3% of the patients required further treatment. In cases of leishmaniasis, the most common reasons for discontinuing treatment were believing that they do not require treatment (28.9%), disregarding the disease (27.3%), and a lack of medication in SCLDTC (26.7%). Other reasons were as follows: not wanting to contact due to the COVID-19 pandemic (10.2%), being out of the city due to SAW (5.9%), and not being able to start treatment due to a lack of information regarding the safety of CL treatment in pregnant women (1.1%) (Table 4).

Table 4: Distribution of reasons for discontinuing leishmaniasis treatment.

Reasons for dropping out	Number	Percentage
Believing that one does not need treatment	54	28.9
Disregard to CL	51	27.3
Absence of medication at the SCLDTC at the time of the study	50	26.6
Not wanting to apply to the SCLDTC due to the covid 19 pandemic (Social isolation)	19	10.2
Inability to access treatment service due to seasonal agricultural work	11	5.9
Inability to use medication due to pregnancy	2	1.1
Total	**187**	**100.0**

Discussion

The gender distribution of the study participants was comparable, with the majority being young patients under the age of 20. In a study by Beyazgul et al., the gender distribution was found to be similar to that of this study. It is possible to conclude that gender has no bearing on leishmaniasis exposure or access to health services (6). In places where CL is endemic, the majority of cases are children and they play an important role as a local source of transmission (13).

Both educationally and economically, the patients can be regarded as vulnerable. In this study, it was observed that the majority of those who abandonment treatment were low-income, unemployed and low-educated individuals. Many studies have found that CL is more widespread in low-income populations and associated with a social stigma. CL is notable for its negative psychological rather than physical effects (14-16).

Studies examining patient compliance with CL and VL treatments show that the prevalence of patients discontinuing treatment varies between 16.3% and 42.1% (17-19). In our study, the frequency of treatment discontinuation was quite high (50.5%). This may be due to the fact that the majority of the treatment abandonment group consists of unemployed people with low income and education levels, and as a result, individuals have low awareness of the disease and its consequences.

In the present study, the most common reasons for discontinuing treatment were a lack of belief in the necessity for treatment, disregarding the disease, and a shortage of medication. For many years, there were no problems related to treatment continuation due to the lack of medication in SCLDTC. However, disruptions in medicine supply during in SCLDTC the study period caused some patients to be unable to continue their treatment. One of the most common individual causes for CL treatment delay, according to Koruk et al., is neglect (14.6%) (9). Patients' lack of understanding and awareness regarding CL may have contributed to both a delay in seeking treatment and treatment discontinuation. Kansal et al. in a study on VL conducted in Bihar, India in 2017 showed that the primary causes for abandonment of treatment were pharmacological side effects and feeling better after starting treatment (19). Patients are expected to stop seeking treatment if they do not care about the disease or do not believe they need treatment. Additionally, the high treatment discontinuation rate could be attributed to patients' low educational level. Similarly, educational level was found to be a determining factor in several studies examining infectious diseases and treatment adherence (18, 20).

In comparison to other factors, the conditions created by the pandemic and shortage of CL medications are periodic issues that exacerbate problems beyond expectations. According to Shimels et al., almost 57% of those with chronic conditions said the COVID-19 pandemic had a negative impact on their visits to health centers (14). Following the report of the first COVID-19 case in Turkey on March 9, 2020, social distancing measures were implemented throughout the country to control the spread of the pandemic. Owing to the fear of contagion, new measures such as curfew and quarantine, were implemented, which caused the general population to stay at and not leave the house. Patients who had to visit health centers for treatment on a regular basis may have delayed their treatment as a result of these drastic changes in social life.

SCLDTC is a health facility that has been effectively diagnosing and treating patients for many years. Diagnosis, treatment, surveillance and follow-up activities are carried out routinely in this center. The center also conducts educational and research activities. For many years, there were no problems related to treatment continuation due to the lack of medication in SCLDTC. However, disruptions in medicine supply during the study period caused some patients to be unable to continue their treatment. According to Koruk et al., the absence of medication accounted for 48.4% of the reasons for CL treatment delays at SCLDTC (9). The fact that 12.3% of patients who dropped out of CL treatment still required treatment is critical in terms of completing the treatment, leaving no scar of the

lesion, and preventing patients from becoming a source of infection.

Seasonal agricultural workers are individuals who travel to other places to work on a regular basis and live in those regions with their families. When the literature is examined, it is seen that these people have difficulty in receiving health services and are a disadvantaged group (21). In this study, SAW was found to be one of the reasons for discontinuing treatment. The reason why seasonal agricultural workers (34.8% of families) could not continue treatment is that they cannot access treatment services because they do not reside in the area. This group is also important since they could potentially carry the infection to other regions due to both being at a low level in terms of economic and sociocultural aspects and being on the move.

Drugs used in the treatment of CL are contraindicated during pregnancy, and it is known that CL does not pose a danger to the developing fetus (22). In this study, pregnancy was the last among the reasons for discontinuing treatment. Despite patients' treatment being discontinued, the fact that the fetal–maternal transition was not reported mitigates this negative situation.

Conclusion

Efforts to increase public and patient understanding of CL transmission and its implications should be prioritized.

To avoid a shortage of drugs for the treatment of leishmaniasis, the health system and its officials must take precautions.

Screening, diagnosis, and treatment programs should be established for moving populations such as agricultural workers. Active surveillance and mobile health services should be provided for agricultural workers. Agricultural workers should be informed about CL disease and should be examined. Those diagnosed with CL should be given treatment services.

Treatment completion is one of the most important steps in disease control. Because the healing process is protracted and active CL cases operate as a source of infection when not treated for a sufficient amount of time and dose, it is vital to raise disease awareness in order to ensure CL treatment completion. Patients' and society's knowledge and awareness of CL should be increased, public education programs should be organized, patients admitted to SCLDTC and their relatives should be informed, and the importance of completing the treatment should be explained, especially in neighborhoods where CL cases are densely distributed.

Limitations

Since the patient group participating in this study consisted of homogeneous and low-educational individuals, patient education was not evaluated before the treatment. In this study, the frequency of patients who discontinued treatment was calculated and focused on the reasons for discontinuing treatment. Therefore, no comparison was made with patients who completed the treatment. This study was conducted at SDLTC, patients diagnosed and treated in different centers could not be included in this study. Because patients are asked retrospective questions, they may not accurately remember the real reason of abandonment treatment. Some patients may have made false statements in order to hide the real cause. Further studies are needed to obtain more precise results.

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