



**Porsesh Research and Studies Organization**

---

## Leishmaniasis Outbreak in Kabul: Case Study of District 13<sup>th</sup> (2017)

(Social Science Approach)



**Investigators:** Somaya Fedayee, Hanifa Yari, Zobiaida Karimi, Sughra Azizi and Mina Nawrozi  
**Supervisor:** Mohammad Jawed Nazari

*September 2017*

## ACKNOWLEDGEMENTS

---

This report is made possible by the immense contribution of Porsesh Research and Studies Organization (PRSO)'s research board members Ehsan Shayegan, Mohammad Jawed Nazari, Ahmadshah Mobariz, Masood Sadat and Mahdi Frough. This research is a team effort of American University of Central Asia (AUCA)'s five students Somaya Fedayee, Zobaida Karimi, Hanifa Yari, Sughra Azizi and Mina Nawrozi who have collected and analyzed data in their summer break as part of their assignment as Research Interns in Kabul.

We are thankful of Markaz Rah Marefat, especially the principal Mr.Esmatullah Yousufi, who has provided us with the exceptional field support and has helped us find Key Informants to interview. We also thank Key Informants who have shared their thoughts and perceptions without any hesitation.

# Contents

Executive Summary.....	4
Introduction and Background .....	5
Socio-Economic Background .....	6
Study Objectives .....	7
Methodology .....	7
Limitations .....	8
Challenges .....	8
Ethical Considerations.....	8
Study Findings.....	9
<i>Extent of the disease</i> .....	9
Geographical Coverage.....	9
Density .....	9
Why did Leishmaniasis Outbreak in Shahrak-e-Itfaq? .....	10
Knowledge .....	10
<i>Practice</i> .....	10
Treatment .....	10
Prevention .....	11
<i>Socio-Economic Risk Factors</i> .....	12
<i>Efforts to Diagnose, Treat and Control CutaneousLeishmaniasis</i> .....	12
Government Responses.....	12
Community Responses.....	13
Private Hospitals Contribution.....	14
<i>Leishmaniasis Outbreak Implications on Residents</i> .....	14
Social Implications.....	14
Psychological Implications .....	15
Economic implications.....	15
<i>Recommendations</i> .....	15
Governmentand and NGO .....	15
Community .....	16
<i>Refrences</i> .....	17

## **Executive Summary**

Shahrak-e-Itfaq – a densely populated area in district 13 of Kabul, has been affected by Leishmaniasis since 2014. No serious intervention has been undertaken by any national or international organizations to address this issue. In 2016 PRSO undertook a volunteer field research to study the extent of the disease to inform policy makers and active health organizations. Despite the findings of the research which shows a shocking health issue, no significant progress has been made to alleviate the disease. This paper presents a follow up research to understand perceptions on factors causing Leishmaniasis outbreak in the Shahrak-e-Itfaq, understand the current effort (from community and government) to diagnose, treat and control Leishmaniasis, and to shed light on Leishmaniasis outbreak's health, socio-economic implication on residents' livelihoods.

Qualitative methods that includes case study and Key Informant Interviews(KII) has been adopted for this research. Researchers were assigned to take detailed notes from the field. In total nine KIIs and two case study have been conducted in July-Aug 2017.

Findings of this field research show that significant number of Leshmaniasis incidents are present in Shark-e-Itfaq area of 13<sup>th</sup> district. Four main areas of the town that included Tapa-e-Sankar, ShahrakMosawee, ShahrakeWaliAsar (in the hillside of the mountain), and Qalaye Ghulam Haidar (in Chehilton Naw Abad) are the infected areas. Despite visibility of many incidents in field researcher's glance, few interviewees claimed that numbers are decreased comparing to the last year. Following PRSO's 2016 report on the same issue, a mobile on side clinic operated for five months in the area. The outcome of the operation was described satisfactory. However, the center stopped delivering services despite the persistence of the disease in the area and high vulnerability of more people to be affected. Lack of timely intervention in the area may lead to escalation of the disease there and it is likely to spread to the nearby locations as well. Observations show that treatment of the affected and the prevention measures should go hand in hand to root out the disease. Furthermore, efforts towards improvement of economic condition of the area will also help alleviate Leshmaniasis and the like.

## Introduction and Background

Leishmaniasis is epidemiologically diverse disease caused by haemoflagellate protozoan parasites of the genus *Leishmania* (family Trypanosomatidae) transmitted by the bite of the female *Phlebotomus* sandflies.<sup>1</sup> This disease is prevalent where sandfly vectors and mammalian reservoirs exist in sufficient numbers to permit frequent transmission.<sup>2</sup> Leishmaniasis is caused by infection with Leishmaniasis parasites, which are spread by the bite of phlebotomine sand flies.

There are several different forms of leishmaniasis in people. The most common forms are cutaneous leishmaniasis, which causes skin sores, and visceral leishmaniasis, which affects several internal organs (usually spleen, liver, and bone marrow).<sup>3</sup> Cutaneous leishmaniasis usually produces ulcers on the exposed parts of the body, such as the face, arms and legs. There may be a large number of lesions – sometimes up to 200 – which can cause serious disability. When the ulcers heal, they invariably leave permanent scars, which often result in serious social prejudice.

Anthroponotic cutaneous leishmaniasis is a major public health problem in Afghanistan (WHO).<sup>4</sup> For almost a decade, Kabul, Afghanistan, has had the highest incidence of cutaneous leishmaniasis in the world, with an estimated 67,500 to 200,000 cases each year (PMC)<sup>5</sup>. Kabul is currently the largest focus of anthroponotic cutaneous leishmaniasis worldwide (WHO).

Though Kabul is the largest leishmaniasis affected area in the world, people in some suburban areas in Kabul city like Dasht-e-Barchi (District 13) are highly vulnerable. As WHO described, the disease affects some of the poorest people on earth, and is associated with poverty, malnutrition, population displacement, poor housing, a weak immune system and lack of financial resources.

---

<sup>1</sup>A.L. Bañuls, M. Hide, F. Prugnolle *Leishmania* and the leishmaniasis: a parasite genetic update and advances in taxonomy, epidemiology and pathogenicity in humans *Adv Parasitol*, 64 (2007), pp. 1-109

<sup>2</sup>Berman, J. D., "Human leishmaniasis: clinical, diagnostic, and chemotherapeutic developments in the last 10 years," *Clinical infectious diseases* 24, no. 4 (1997): 684-703.

<sup>3</sup> "Parasites - Leishmaniasis," Center for Disease Control and prevention, accessed on June 1, 2016, <<http://www.cdc.gov/parasites/leishmaniasis/>>

<sup>4</sup> "Neglected tropical diseases: Cutaneous leishmaniasis in Afghanistan," World Health Organization, accessed June 1, 2016, <<http://www.emro.who.int/neglected-tropical-diseases/countries/cl-afg.html>>

<sup>5</sup> World Health Organization Cutaneous leishmaniasis, Afghanistan. *Weekly Epidemiol Rec.* 2002;77:246

In 2005, total of 252 and 108 persons were surveyed in the House Hold Survey (HHS) and FGDs respectively which confirms the prevalence of cutaneous leishmaniasis in Kabul. 128 of 252 HHS respondents reported a family member with leishmaniasis.<sup>6</sup>

After huge intervention by national and international organizations in Kabul, since 2007 the incidents of Leishmaniasis have been reduced to almost zero in high and middle class areas of the city.

However, since 2014 the disease has spread in one of the remote areas in west of Kabul. No serious intervention has been undertaken by any national or international organizations to address this issue. The Leishmaniasis Hospital in Shahrak-e-Itfaqhas recently been established to provide services. PRSO has undertaken this research to provide solid evidence from the area.

### **Socio-Economic Background**

District 13, located in the western part of Kabul, is a suburban area in Kabul city. The outbreak of leishmaniasis diseases in the area has challenged the normal life of affected citizens over the last three years. This area is over-populated and disadvantaged as compared to other parts of the city.

There are estimations of the District 13's population but no valid record exists to reflect the affected community's socio-demography and population. Shahrak-e-Itfaq contains approximately 7,000 households and the population peaks to more than 50,000 people, according to a community elder.<sup>7</sup>

The affected area is one of the marginalized parts in Kabul and lacking in terms of social services, education, transportation, sanitation, hygiene system, health, etc. Ibrahim's drugstore is the only center people refer to at times of emergency. It is extremely poor in terms of equipment and quality of medicine. The area is a cluster of minor suburbs, connected by dusty roads, narrow and polluted streets of flowing ditch water and people living there are mostly day laborers, fully dependent on daily wages.<sup>8</sup>

---

<sup>6</sup> Reithinger, Richard, Khoksar Aadil, Jan Kolaczinski, Mohammad Mohsen, and Samad Hami, "Social impact of leishmaniasis, Afghanistan." *Emerg Infect Dis* 11, no. 4 (2005): 634-6, (accessed on May 30, 2016) <<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3320322/>>

<sup>7</sup> KII, Male, Kabul, March, 27, 2016

<sup>8</sup> Ehsan Shayegan and Mohammad Jawed Nazari, "Leishmaniasis outbreak in Kabul: Case study of District 13 (2016), <[http://www.porseshresearch.org/porseshv2/wp-content/uploads/2016/11/Leishmaniasis-Outbreak-in-Kabul\\_2016-Case-Study-of-13-District.pdf](http://www.porseshresearch.org/porseshv2/wp-content/uploads/2016/11/Leishmaniasis-Outbreak-in-Kabul_2016-Case-Study-of-13-District.pdf)>, (accessed 15.08.2017)

## **Study Objectives**

This research is a follow up study of "Leishmaniasis Outbreak in Kabul: Case Study of District 13 (2016)"<sup>9</sup> and intends to:

1. Understand perceptions on factors causing Leishmaniasis outbreak in the Shahrak-e-Itfaq
2. Understand the current efforts (from community and government) to diagnose, treat and control Leishmaniasis
3. To shed light on Leishmaniasis outbreak's health, social and economic implication on residents' livelihoods.

## **Methodology**

In 2016 PRSO published a report on Leishmaniasis outbreak in Kabul. It was widely covered by media within and outside Afghanistan. Government has promised to implement preventive and treatment strategies. In 2017 PRSO wanted to know what has happened so far? Are preventive and treatment strategies in place? How people feel and whether Shahrak-e-Itfaq is under health attention?

Following themes are considered for the study of 2017:

- **Prevalence**
  - Geography (the scope of the affected areas)
  - Density (per household and social groups- also to see if it has increased or decreased compare to the last year)
- **Public Awareness**
  - Treatment (to know intervention by government or NGOs, and where the patient refers to? what are community's common practice to diagnose, prevent and treat leishmaniasis)
  - Preventive strategies
  - Understanding the disease, its causes and effects
- **Intervention**
  - Impact of any possible intervention(s)

Qualitative methods that includes case study and Key Informant Interviews(KII) has been chosen for the research. Researcher were assigned to take a detailed field notes/observations as well. In total nine KIIs and two case study have been conducted in July-Aug 2017.

---

<sup>9</sup> Ibid

No	Types of Interview/study	Interviewee	Number
1	KII	Community Representative	4
2	KII	Local private and/or public hospitals or other healthcare centers, and/or pharmacy	3
3	KII	A representative from Kabul city's Leishmaniasis Hospital	1
4	KII	Head/principle of local school	1
5	Case study	Patients	2

---

### Limitations

1. This research would be more complete and comprehensive if it was conducted a door to door survey. But because of budget constraints we have limited the research in KIIs and case studies.
2. The assessment was conducted by volunteer research students from AUCA students. Porsesh did not have financial resources to hire the field researchers and investigators.

### Challenges

1. The survey teams were received very well in the field. However, due to lack of understanding among the people, there were expectations in return for data collection.
2. As 2016, the community leaders expected PRSO to deliver them services and did not understand that PRSO is a research organization and does not deal with provision of services.

### Ethical Considerations

The formulation and implementation of this study adhered strictly to the ethical principle of “do no harm” as well as the research ethics protocols of PRSO. The field staff were briefed on the ethical considerations before conducting the interview. Deep knowledge of the local cultural and social context was provided by PRSO leadership. PRSO explained the research objective to affected community. An informed oral consent was taken at the beginning. Interviewee was said to not mention their names and affiliation, and was promised that they are not going to be quoted by their identification.



## Study Findings

### *Extent of the disease*

#### **Geographical Coverage**

A significant number of Leishmaniasis incidents are still present in Shark-e-Itfaq area of 13<sup>th</sup> district. Four main areas of the town namely, Tapa-e-Sangar, Shahrak-e- Mosawee, Shahrak-e-Waliasar (at the hillside of the mountain), and Qalay-e-Ghulam Haidar Khan (in Chehilton-e-Naw Abad) are the infected areas. The main source of the sand fly, according to an interviewee is Chihel Dokhtaran Mountain which is located nearby Sharak-e-Itfaq. The houses located on the hillside, upper than neighboring areas, are the most effected one. Based on community's observation, dark houses made of mud is the common places that sand fly are normally found. However, the main sources are yet unclear. Few interviewees think that rats are the main host for the sand flies while local doctor Mr. Jawad Atae believe that "buried bodies of humankind during the civil war in Chehel Dukhtaran Montain may have changed the nature of soil conducive to the butter fly."<sup>10</sup> Identification of the main sources require scientific assessment by health authorities or medical institutions.

#### **Density**

This ex-post study shows some changes in interviewee's perception regarding the density of the disease. Despite visibility of many incidents in field, few interviewee claimed that number of affected people have decreased as compared to the last year. They referred to the followign as the reason for this change :

1. People have become more alert to treat the disease. They, despite dealing with poverty, have visited private and public hospitals for treatment.
2. Students were given awareness by a school principal and teachers about the disease.
3. A mobile on site clinic operated for five months in the area. The outcome of the operation was described satisfactory but not enough to eradicate the disease. This centre, however, was stopped onside operating without any progress towards full treatment of the affected people and eradication of the disease.

Decrease in number of incidents does not mean decrease in density: "leishmaniasis decreased in number but number of incidents still persist in the area," said an interviewee.<sup>11</sup> This also need another research that why number of certain people are "intensely" affected by sand flies.

---

<sup>10</sup> KII, Male, Kabul, July 17, 2017

<sup>11</sup> KII, Male, Kabul, July 25, 2017

## **Why did Leishmaniasis Outbreak in Shahrak-e-Itfaq?**

### **Knowledge**

Despite the fact that the prevalence of diseases in Shahrak-e-Itfaq dates back four years,<sup>12</sup> the community's awareness regarding the disease is limited to names and symptoms. A significant number of interviewees called it 'Saldana' which is not fatal but horribly disfiguring.<sup>13</sup> The interviewees claimed they have seen the fly (phlebotomine) and described it as thin and gray with long wings and longer legs that jumps 5cm-10cm and mostly lives and moves in the soil. They are active during the night.

There have not been any public notices or announcements from the government and NGO to alert people and provide information for them. People have limited information about its cause and treatment.

No training has been given to the community to treat and prevent Lishmaniasis. A training was provided for local doctors to take over the responsibility but number of incidents are much more than they could possibly handle it.

Public awareness were limited to personal advice only. For example a doctor advised the visitors to "use some limewater on their floor, keep their bathrooms and toilets clean and make sinkhole for their toilets."<sup>14</sup>

### ***Practice***

#### **Treatment**

There are three types of treatment that people use in Shahrak-e-Etefaq. People mainly visit the leishmaniasis hospital in Dar-ul-Aman. Some of them also use homemade remedies. There are cases where the infects refer to the religious clerics (Mullah) for spiritual treatment.<sup>15</sup> According to people, homemade remedies are also helpful. They use the Nill Totia, SafariTotia, Patas and Olive Oil for treatment that according to interviewees sometimes cures the disease. However, in rare cases people have used acid to cure the disease without being aware of its terrible consequence.

---

<sup>12</sup>KII, Male, Kabul, May, 20, 2016

<sup>13</sup> KII, Male, Kabul, July, 25, 2017

<sup>14</sup>KII, Male, Kabul, July, 23, 2017

<sup>15</sup>KII, Male, Kabul, July, 23, 2017

Table below illustrate the treatment practices.

Homemade <sup>16</sup> medicine	Often
Using normal bed nets	Rarely
Insecticide impregnated bed nets	Sometimes
Visiting private hospital and pharmacies	Very frequently
Visiting the Dar-ul-Aman Leishmaniasis Hospital	Often
Visiting other public clinics	Sometimes
Insecticide houses, gardens and yards	Rarely
Irregular visit to Hospital as result of poverty and accessibility	Often

### Prevention

Leishmaniasis can be partially prevented by sleeping under nets treated with insecticide.<sup>17</sup> It can also be mitigated by spraying insecticides to kill the sandflies and treating the infects at the early stages of the disease to prevent further spread.<sup>18</sup> In Shahrak-e-Itfaq people have hardly access to insecticide nets and the area has never been sprayed with insecticides. Government has not initiated any preventive efforts in the area. 3. Blurred Picture of Phlebotomine

As a result of conducting 9 key informant interviews, we found that the understanding of the residents regarding the living area/host of phlebotomine is not clear. Few interviewees said that the sandfly lives and grows among the soil.<sup>19</sup> In Shahrak-e-Itfaq houses are built from mud that can naturally provide sanctuary for the sand fly. It grows under carpets and corner of the houses.<sup>20</sup>Others claim that animals such as rats and dogs that exist in Shahrak-e-Itfaq are hosts for the sandfly.

Urbanization is another factor that was referred to in a KII. Interviewee believes that hillside of the mountain was a natural reservoir of the phlebotomine. People with poor economy, less healthcare and unaware of urban culture can be a potential victim of the disease.

Few believed that feeding source of phlebotomine is the same as Malaria. Therefore, they complain about their current hygiene and polluted street.

<sup>16</sup>"Homemade" is the word used in KIIs. It means natural medication made by local people

<sup>17</sup>"Leishmaniasis Fact sheet N°375". *World Health Organization. January 2014*. Retrieved 17 February 2014.

<sup>18</sup>"Leishmaniasis Fact sheet N°375". *World Health Organization. January 2014*. Retrieved 17 February 2014.

<sup>19</sup> KII, Male, Kabul, August, 2, 2017

<sup>20</sup>KII, Male, Kabul, August, 5, 2017

### ***Socio-Economic Risk Factors***

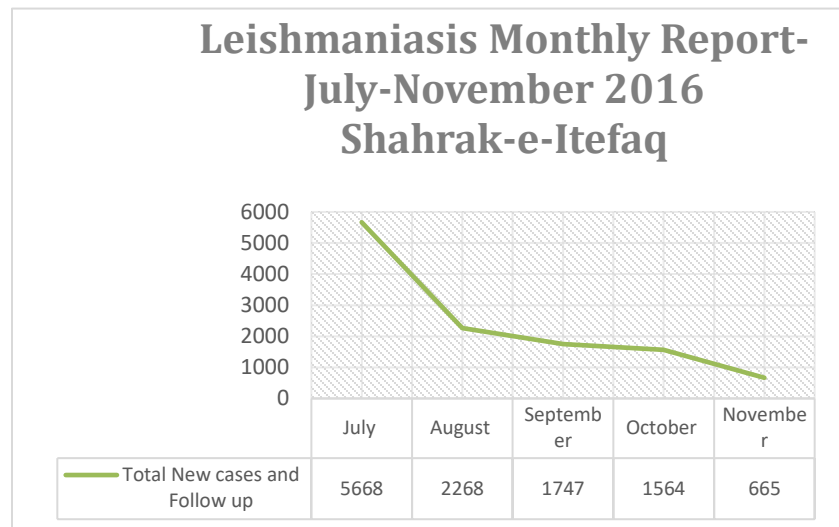
Interviewees in Shahrak-e-Itefaq assume that all age groups, especially children between 7-9 years are effected by Leishmaniasis. Women are the second largest group infected by the diseases because the spend more time at home. Old people are more affected than the younger ones. The reason might be that younger people may go outside of the affected area for work. Poor families have more cases of leishmaniasis than the richer one.<sup>21</sup>

### ***Efforts to Diagnose, Treat and Control Cutaneous Leishmaniasis***

#### **Government Responses**

Government effort to prevent, treat and eradicate leishmaniasis was not sufficient in Shahrak-e-Itefaq. The only governmental clinic operated on site for five months in 2016. Later on it was closed due to budget constraints.<sup>22</sup>The government has not distributed insecticide bed nets and has not sprayed the area. Dar-ul-Aman hospital is the only government center to treat the disease. This center however, is very far, costly and time consuming for people. The number of infects referring to the hospital for treatment is beyond what it can attend to.

Currently, the disease is widely spreading, but there is no "on site" clinic to operate. The intervention of the mobile clinic and seasonal differences in the last year (2016) the number of incidents as you can see in the figure is decreased but the cases have been on the rise since the clinic has left the area.



<sup>21</sup> KII, Male, Kabul, July, 9, 2017

<sup>22</sup> KII, Male, Kabul, August, 5, 2017

According to a doctor from Dar-ul-Aman Leishmaniasis Hospital, "government does not have budget to tackle the issue. NGO also couldn't provide bed nets and spray the area because it is too wide."<sup>23</sup>

#### **Case study 1: How Shirin Gul suffers of Leishmaniasis**

*Shirin Gul is 49 years old. She lives in Shahrak-e-Itfaq. She says that “ last year during autumn season I noticed a reddish small spot on my hand, when a friend of mine saw this small spot on my hand. She asked me to visit the leishmaniasis hospital and she gave me the address. I followed her instructions, then I went to leishmaniasis hospital in Dar-ul-Aman. I felt very bad when I heard the result of my test was positive. The doctor gave me some injections and once a week I used to go to hospital. Doctor has advised me to keep my hands away of the water and soap but when sometime I can't protect it well, I suffer from severe pain and itching. I often go to hospital to treat this. It was one small spot on my left hand but over time, many small spots grew surrounding it.*

*I have been traumatized by the diseases which is very painful with a lot of psychological implications. I had a very bad time when I was suffering from the diseases. Even my children were interrupted from the pain I had gone through. I was trying to strictly follow my doctors' advice but treating leishmaniasis takes a lot of time. Once, I was about to leave my treatment, fortunately the doctors and my family members insisted me to follow the treatment process. It took me a year to fully recover, but I was in a big trouble going to Dar-ul-Aman hospital, as it is very far and costly for us. Many people leave the treatment process in the middle when they can't afford to pay for car rent and going that far distance from Shahrak-e-Itfaqto Dar-ul-Aman.*

#### **Community Responses**

Some families prevented from the disease by maintaining hygiene in their living area, cementing their houses, spray insecticide in their houses, using nets, and shutting the holes. But most of the people do not have the opportunity to afford such facilities due to poor economy . The only thing that they are able to do is to buy net and set it on their windows.

People have tried to attract media's attention in order to be heard by the government and NGOs. This effort has not yet resulted in a sustainable solution for the disease. Interviewee claimed that community representative also visited officials at the Ministry of Public Health but they did not get any considerable response from them.<sup>24</sup>

---

<sup>23</sup>KII, Male, Kabul, August, 10, 2017

<sup>24</sup> KII, Male, Kabul, July, 23, 2017

## Private Hospitals Contribution

No specialized private hospitals is available on site in Shahrak-e-Itefaq for Leishmaniasis treatment. There are some drugstores that sell some medicines for Leishmaniasis treatment .

## *Leishmaniasis Outbreak Implications on Residents*

### Social Implications

Leishmaniasis in Shahrk-e-Itefaq is not fatal, however, could have considerable social impact due to stigmatization of patients when the lesions/scars appear on the face or visible extremities. Dr. Basher Ahmad Ahmadi reported cases where a fiance separated because of leishmaniasis ulcers.<sup>25</sup>

In the society the negative implications are that society, family members, friends and schoolmates avoid the victims because they are afraid of being infected. It causes victims to feel bad about it. A school principal states that some families request him to create separated classes for those who have leishmaniasis.<sup>26</sup> Although doctors have advised that leishmaniasis is not transmissible from one to another directly but still they are afraid and try to avoid the victims. Victims are mostly hurt when the community avoids them and they cannot communicate well with others.

---

<sup>25</sup>KII, Male, Kabul, August, 13, 2017

<sup>26</sup> KII, Male, Kabul, July, 23, 2017

### Case Study II: Frida and her family suffers from Leishmaniasis

*Farida is 29 years old. She lives in Tap-e-Sangi of Shahrk-e-Itefaq. Since August 2016, She suffers from leishmaniasis. Her's is a family of six. She and her son was affected by leishmaniasis. She took her son to Atayee clinic- a private substandard clinic- for treatments, as this hospital was contracted by the government to provide health services and treat the leishmaniasis patients in the area. Fortunately it was the time that government has installed a mobile clinic in Atayee hospital and there were a group of doctors assigned by the government to treat the leishmaniasis patients. They were there for three months and gave my son injections that resulted in full recovery of my son's health.*

*Farida explains that clinic stopped providing health services after three months. She adds "in my case, when for the first time I noticed it was a small, red spot as if it's bite by an ordinary mosquitoes, and I even did not think that it was Saldana(leishmaniasis) until my friends warned me that maybe it is Soldana leishmaniasis). Therefore, she asked me to go to leishmaniasis hospital which is located in Durulaman. It is too far and we are in a big trouble. When I went to doctor the result was positive. This spot in front of my eye, in the right side of my face is in fact the symptoms of leishmaniasis. Now, I often meet the doctors and go to leishmaniasis hospital in Darulaman. Almost it's a year that I visit leishmaniasis hospital which is now too far from here. Economically I am in a bad condition. **It's very costly for me while going there and paying for bus rent, also very hard to wait in queue and spend half day to visit the doctor.***

*Since that time, I had 22 injections on my face which has been simultaneous with several side effects such as headache and very negative impact on my neuron system.*

***I am feeling very bad when I am in public and I usually avoid having video calls with my brothers and sister. I always try to be away from the society and people. I feel shy. I feel that the injections has had negative impacts on my face. Therefore, I am trying to find some other homemade medicine, also going to some Mullahs (religious clerics) for any spiritual treatment".***

Going to Dar-u-Aaman takes almost a full day and this has impacted the children drop out from school, as the children cannot attend the class.<sup>27</sup>

### **Psychological Implications**

After the heal of Leishmaniasis ulcers, some scars will remain on victim's body. The scars have negative psychological effects on victims. People state that mostly young girls and boys and after that the older people are negatively affected. It makes them feel ashamed. As in all the interviews children are shamed to talk openly and some painful statements are reported "I feel shame to come to school, my classmates are laughing. Thus I prefer to stay at home or be alone." However, younger children do not really feel bad because they do not understand what those scars are.<sup>28</sup>

### **Economic implications**

People in Shahrak-e-Itfaq are mostly poor and sometimes they do not have money to pay for transportation. They also do not have enough money to go to private hospitals. Therefore, sometimes they do not visit the hospital while they have to receive injection for 14 to 21 times. An example is a woman who had 25 ulcers on her body but she did not have money for transportation. Therefore, she walked about 3 hours to Dar-ul-Aman hospital every day.<sup>29</sup>

### **Recommendations**

In the face of recent national and international scientific evidence, the members of our team, have elaborated some recommendations for the management and control of CL in Shahrak-e-Itfaq and all over Afghanistan:

### **Government and NGO**

- Leishmaniasis is widely widespread in Shahrak-e-Itfaq since long time ago. This year number of incidents are decreased but the disease has intensified compared to the past year. Therefore, government should take a considerable action and provide a better and stronger treatment and implement preventive measures. A branch of Dar-ul-Aman Hospital should transfer onside to diagnose, treat and prevent spread of Leishmaniasis in an appropriate, affordable and accessible manner.
- Control of the vector should be carried out by means of environmental management (construction of houses on barren areas, cleaning and reorganization of peridomiciliary areas), adoption of individual protective measures (netting for doors and windows, use of bed nets impregnated with insecticides in high-risk areas) and the use of insecticides in the environment in special situations (risk of epidemics, intradomiciliary transmission). The use of insecticides (collars, pipettes, sprays)

---

<sup>27</sup>KII, Male, Kabul, July, 02, 2017

<sup>28</sup>KII, Male, Kabul, July, 09, 2017

<sup>29</sup>Interviewer observation, July 09, 2017

- To tackle limitation of awareness since public awareness is limited to diseases' name and symptoms, the government needs to start an awareness campaign in the area to let people understand the disease's cause, implication, prevention and treatment. It can happen via public awareness campaigns in the local communities and in schools, distribute informational brochures and installing public notices in public places
- Provide and distribute insecticide-treated nets including insecticide sprays to reduce or interrupt the transmission and spread of the disease.

### **Community**

- Encourage early visit to healthcare centers for diagnosis of leishmaniasis after symptoms are observed. Early detection and regular treatment of leishmaniasis cases help reduce spread of the disease.
- Implementing health education measures in endemic areas. These activities should be carried out jointly by health officials, who should be properly trained to inform the population about the principal measures for control of leishmaniasis, including of individual protection (use of sand fly-proof nets, netting for windows and doors, avoiding outdoor activities at twilight and at night, among others). These measures should be permanent and carried out with district associations and community leaders.
- Staying in covered places after sunset and covering of face in case of going out
- Encourage behavioural change such as avoiding sleeping in open spaces without bed nets.
- Participate in public trainings by the MoPH and other stakeholders, reading texts available in print and online on how to treat and prevent leishmaniasis, and disseminate the knowledge to local residents via public forums such as the Friday sermons in local mosques.
- They should consider their hygiene, insecticide their houses, shut the holes, and cement the houses
- Online campaign in attracting funding to start a Community Based Preventive/Care 4L with a concrete strategy to aware all those Non Afghan Residents ARA to donate.....



## References

- A.L. Bañuls, M. Hide, F. Prugnolle Leishmania and the leishmaniasis: a parasite genetic update and advances in taxonomy, epidemiology and pathogenicity in humans *Adv Parasitol*, 64 (2007), pp. 1-109
- Berman, J. D. "Human leishmaniasis: clinical, diagnostic, and chemotherapeutic developments in the last 10 years." *Clinical infectious diseases* 24, no. 4 (1997): 684-703.
- Cutaneous Leishmaniasis, Afghanistan, World Health Organization, *Weekly Epidemiol Rec*, (2002);77-246.
- Ehsan Shayegan and Mohammad Jawed Nazari, "Leishmaniasis outbreak in Kabul: Case study of District 13 (2016), <[http://www.porseshresearch.org/porseshv2/wp-content/uploads/2016/11/Leishmaniasis-Outbreak-in-Kabul\\_2016-Case-Study-of-13-District.pdf](http://www.porseshresearch.org/porseshv2/wp-content/uploads/2016/11/Leishmaniasis-Outbreak-in-Kabul_2016-Case-Study-of-13-District.pdf)>, (accessed 15.08.2017)
- "Leishmaniasis Fact sheet N°375". World Health Organization. <<http://www.who.int/mediacentre/factsheets/fs375/en/>>
- "Leishmaniasis Fact sheet N°375". World Health Organization. January 2014. Retrieved 17 February 2014.
- "Neglected tropical diseases: Cutaneous leishmaniasis in Afghanistan." World Health Organization. <http://www.emro.who.int/neglected-tropical-diseases/countries/cl-afg.html>
- "Parasites – Leishmaniasis." Center for Disease Control and prevention. <<http://www.cdc.gov/parasites/leishmaniasis/>>
- Reithinger, Richard, Khoksar Aadil, Jan Kolaczinski, Mohammad Mohsen, and Samad Hami. "Social impact of leishmaniasis, Afghanistan." *Emerg Infect Dis* 11, no. 4 (2005): 634-6.

---

### *Investigators Note:*

*Names, used in case studies are not real. They are replaced by other names in order to preserve the text and keep it understandable.*