

The Effect of Dryness on the Prevalence of Few Cases of Cutaneous Leishmaniasis in North Iraq

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Abstract

This is a contribution to study the complex effect of rainfall on the incidence of cutaneous leishmaniasis in an endemic area (AL-Mohalabiya) in Ninawa province in the north region of Iraq.

Key words:

effect .dryness .prevalence . cases . cutaneous leishmaniasis. AL-Mohalabiya. Ninawa .north. Iraq.

Introduction

The cutaneous leishmaniasis is one of the endemic diseases in Iraq [1-7] Many studies were performed on both vector and reservoir in many parts of Iraq [1,3,6,7,8] during the last century. Also the studies were oriented towards the parasite and the different strains of *Leishmania tropica* and *L. major* with function to the geographical regions [3,6,7,8,9,10,]. The suspected animals as reservoir are dog, jackal and rodents [3,6,7]. The suspected vectors are *Phlebotomus papatasi* and *Sergentomyia baghdadis* [2,3,4,5,6,12]. The distribution of sandflies depends widely on the geographical regions of Iraq [2,3,5,6,8]. However the *P.papatasi* forms about 95% of the total density of the species [1,3,5,7,12]. The suitable places of breeding are animal shelters, deep crack in the soil, dog pits, and rodent's burrows [3,5,7]. The number of rodents (as possible reservoir) depends widely on the cultivated area [3,7,10]. The plateau of Al-Jazera is well known in Iraq as the main source of wheat, and is depending entirely on rainfall. The main average of rainfall in Iraq in this region is (900) mm/year. In 1998 this average fall-of (-80%) was according to the Ministry of Irrigation.

Method and Materials

A traditional area of cutaneous leishmaniasis (AL-Mohalabiya) in north Iraq about 20 km in the west of Al -Moussal City was visited in October 1998.

The number of cases in AL-Mohalabiya area was reported from the regional directorate of health during for the years 1996, 1997 and 1998.

Result and Discussion

Al- Mohalbiya area is well known as one of the endemic area for cutaneous leishmaniasis in Ninawa province [6,8]. The area is a wide flat plateau depends on rainfall as main source of irrigation to the wheat farms. Human dwelling is mud -block or cement made. The reported cases were 10, 108 and 0, respectively in 1996,1997 and 1998 Table(1). In 1998 the rainfall was fall-of (-80%) of the average and this reduced highly the quantities of wheat. Also the average of rodents burrows was (8) in 100 m² in the study area (about 1200 m²) in

the south from the center of the main village. All these barrows were empty now (villagers estimates that the lost of wheat is about 25% of the outcome).

Rodents were migrated towards Tigris River in the west of the endemic area (about 20 km) due to the dryness [9]. So the number and density of sandflies were highly reduced [7,9]. As a result of that unfavorable condition for the reservoir the number of reported cases in 1998 was zero [3,5,7,8,9,12]. Also the villagers noticed that the sneak attacks dwelling in high numbers during the night to search for food are due to the absence of rodents as a main source of nutrition [9]. It is necessary to mention that any kind of insecticide was not used during the dates indicated in the table.

This note indicates that the complex ecological elements affect the prevalence of this disease in this part of Iraq. It seems also that a more comprehensive study in this field is required.

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Table(1) Reported cases of leishmaniasis in the study area.

Area of AL-Mohalabiya / NINA VA province		
Village	No of cases	Date
Center	2	November 1996
Tal Al –Senn	2	
Sheak Ibrahim	1	
Farshah	1	
Mosherfa	1	
Ain al Waah	1	
Al Yazidi	1	
Gazial	1	
Kaberatt	1	
Al Sahaji	1	
Kaberatt	1	January 1997
Tal Zalatt	1	
Adia	2	
Al Boshih	1	
Tal Seroall	5	February 1997
All villages	97	March 1997
All villages	0	During 1998

تأثير الجفاف على انتشار بعض حالات اللشمانيا الجلدية في شمال العراق

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الخلاصة

هذا البحث هو محاولة لدراسة العلاقة المعقدة القائمة بين انتشار مرض اللشمانيا الجلدية وسقوط الإمطار في منطقة موبوءة (المحلبية) في محافظة نينوى في المنطقة الشمالية من العراق.