Molecular Epidemiology of Autochthonous Cases Of Cutaneous Leishmaniasis in Turkey – *Figures are on the rise lately*

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Abstract

INTRODUCTION: [illegible] *Phlebotomus sp.*

✓However, emerging factors such as:

Here, we aim to present the latest data concerning our series of 304 autochthonous CL cases in Turkey, with information on molecular epidemiology of cases including Leishmania species and patient details.

MATERIALS & METHODS: [illegible]

RESULTS:

✓ [illegible] *L. tropica* (n=231; 76.0%), *L. major* [illegible] *L. infantum* [illegible] *L. donovani* [illegible] *L. infantum/L. donovani hybrid* [illegible]

CONCLUSION:

✓ [illegible] *L. tropica* [illegible] *L. infantum* [illegible] ***it is now well documented that L. major and L. donovani are also the causative agents of autochthonous leishmaniasis cases in Turkey.***

✓[illegible] *L. donovani* [illegible] *L. major* [illegible]

✓**Since all presented cases were local people, with no history of recent visits to endemic neighbouring countries, measures should urgently be implemented to prevent the transmission of leishmaniasis within the country, together with large-scale projects that will reveal the reservoirs and vectors of leishmaniasis in Turkey.**

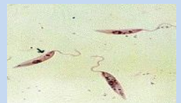
Introduction

❖ [illegible]

❖ [illegible] *Phlebotomus spp.*[illegible]

❖ [illegible]

❖ [illegible]



❖[illegible] *Leishmania tropica*[illegible] *L. infantum*[illegible] *L. major and L. donovani* [illegible]

❖[illegible] *Leishmania* [illegible]

❖ **Here, we present a series of 304 CL cases from Turkey, with the assessment of patients and causing *Leishmania* species.**

CL cases in Turkey

1990-2010: 46.003

2013 only: ~4.500*

*** almost half are Syrian refugees…**

Materials and Methods

❖[illegible]

❖ **Diagnosis =>** [illegible] **MICROSCOPY)** [illegible] **(CULTURE)**

▪ **Real Time PCR =>** [illegible] *Leishmania spp.* [illegible]

▪ **Sequence analyses:** [illegible] *L. infantum* [illegible] *L. donovani*[illegible]

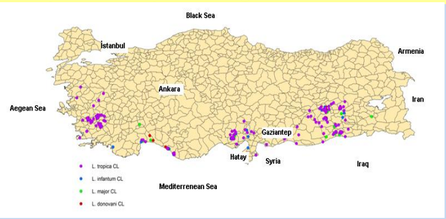
▪ **Inoculation in Laboratory Animals =>** [illegible]

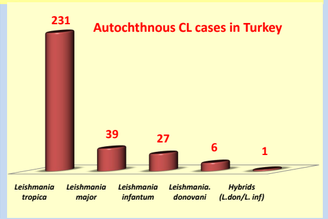
▪ **Reference strains of *L. tropica, L. major, L. donovani* and *L. infantum* were used for comparisons of results.**

A novel culture medium derived from NNN in Celal Bayar University's Research labs by A. Özbilgin during trials of culturing samples which were not cultivated in NNN medium. Patent application is complete now.

Results

❖ **The number of *Leishmania* species identified in the study and the provinces of Turkey where they were diagnosed were shown in Figure 1.**





✓ [illegible] *L. tropica, L. donovani, L. infantum and L. major*[illegible]

✓ [illegible] *L. donovani/L. infantum* [illegible]

✓[illegible]

Presence of CL, VL and canine leishmaniasis caused also by L. donovani and L. major in western Anatolia indicates a high risk of the spread of these infections into Europe.

• *In Manisa province, which is a neighbor of Izmir in western Anatolia, these agents were identified as the causative agents of CL, VL and canine leishmaniasis.*

Causative Agent in Manisa*	Infection
Leishmania tropica	CL + VL+ CanL
Leishmania infantum	CL + VL+ CanL
Leishmania major	CL
Leishmania donovani	VL + CanL
L. infantum/L. donovani hybrid	CL

Conclusions

❖ [illegible] *Leishmania* [illegible]

❖*L. donovani/infantum* [illegible] *Leishmania* [illegible]

❖ **Different clinical manifestations of the same *Leishmania* species may be due to their genomic or proteomic characteristics. These are the parts of further research we plan to conduct in the coming years.**

Understanding the mysteries of leishmaniosis by such studies will no doubt contribute to the efforts for its diagnosis, treatment and breaking of vector-host transmission processess.

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