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Received: 26.01.2017
Acceptance: 22.08.2017
DOI: 10.18521/kt.288157

Konuralp Medical Journal
e-ISSN1309-3878
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www.konuralptipdergi.duzce.edu.tr

Evaluation of Patients with Cutaneous Leishmaniasis Who Admitted to Dermatology Clinic in Kahramanmaras Sutcu Imam University Medical Faculty

ABSTRACT

Objective: Leishmaniasis is a group of diseases, in different clinical forms, caused by the intracellular protozoan parasites, Leishmania species. The disease is transmitted by a female sand fly infected with the parasite sucking blood from people. Leishmania species causes three main clinical forms: cutaneous, mucocutaneous, and visceral disease. The clinical forms may vary by species and/or region of acquisition. Two forms are observed in Turkey; visceral leishmaniasis and cutaneous leishmaniasis. The aim of this study is to examine the status of Cutaneous Leishmaniasis (CL) in the Kahramanmaras province and contribute to the prevention of the disease in this region.

Methods: 20 CL cases were reported officially in 2009. CL was diagnosed by skin biopsy or smear. Intralesional meglumine antimoniate was applied for patients treatment.

Results: Out of 20 cases, 12 and 8 were female and male. According to smear and biopsy, was found positive in 13 cases, and negative in 7 cases and the results of biopsy was assessment as CL.

Conclusion: By defining the status of CL in the region, the study can be considered to contribute to the planning of methods of intervention, public health education and personal preventative precautions.

Key Words: Cutaneous Leishmaniasis, Kahramanmaras, Meglumine Antimoniate

Kahramanmaraş Sütçü İmam Üniversitesi Dermatoloji Kliniğine Kutanöz Leishmaniasis Tanısı ile Kabul Edilen Hastaların Değerlendirilmesi

ÖZET

Amaç: Leişmanyazis hücre içi protozoan parazitlerden kaynaklanan, farklı klinik formlardaki bir hastalık grubudur. Leişmanya türleri kutanöz, mukokutanöz ve visseral formlar olmak üzere 3 esas klinik forma yol açarlar. Türkiye’de visseral ve kutanöz leişmanya formları gözlenir. Bu çalışmanın amacı, Kliniğimize müracaat eden Kutanöz leişmanya (KL) vakalarını incelemek ve bu bölgede hastalığın önlenmesine katkı sağlamaktır.

Yöntem: Çalışmada 2009 yılında Kliniğimize müracaat eden 20 Kutanöz leişmanya vakası incelendi. KL tanısı deri biyopsisi veya smear ile konuldu. Hastaların tedavilerinde intralezyonel meglumin antimonat uygulandı.

Bulgular: 20 vakanın 12’ si bayan 8’i erkek ortalama yaşları 20±15.43 yıl idi. Sürüntü ve biyopsi sonuçlarına göre 13 vakada KL pozitif bulundu.

Sonuç: Bu çalışma bölgedeki KL durumunu tanımlayarak; müdahale yöntemlerini, halk sağlığı eğitimin ve kişisel koruyucu önlemlerin planlanmasına katkıda bulunabileceği düşünülmektedir.

Anahtar Kelimeler: Kutanöz Leishmaniasis, Kahramanmaraş, Meglumin Antimonat.

INTRODUCTION

Leishmaniasis is a disease contracted by humans during the blood sucking of a female sandfly (Phlebotomus, sandfly) infected with the Leishmania species parasite, and is endemic in approximately 98 countries. The incidence is estimated to be 1.5 million new cases each year (1,2). In Turkey, the disease is seen in the south-east of the country, primarily in the province of Şanlıurfa, and is known as “Urfa ulcer, Antep ulcer, year ulcer, Aleppo ulcer and oriental beauty spot” (3).

The Leishmania species cause 3 different clinical tables, cutaneous leishmaniasis (CL), visceral leishmaniasis (VL) and mucocutaneous leishmaniasis (4,5-7).

VL and CL caused by the Leishmania species, which are seen in Turkey cause serious health problem in Mediterranean countries, the Middle East, India and South America (8).

The infection agent of VL in Turkey is Leishmania infantum and was reported to cause a total of 413 cases between 2000-2014 (9).

The agent of the CL form is Leishmania tropica and has been reported endemic primarily in Aydın as well as Sanliurfa, Osmaniye, Adana, Hatay, primarily Aydın in Afyon, Mugla, Kahramanmaras and Mersin (10).

A total of 29845 CL cases were reported in Turkey between 2000-2014 (9).

The aim of this study is to investigate cutaneous leishmaniasis (CL) disease among the patients who admitted to the outpatient clinic of the Dermatology Department of Kahramanmaras Sutçu Imam University Faculty of Medicine, and to contribute to the prevention of the disease in this region.

MATERIAL AND METHODS

The sampling of the study includes patients who admitted to outpatient clinic of the Dermatology Department Kahramanmaras Sutcu Imam University Medical Faculty between January and September 2009, with skin lesions that did not heal for several months or one year. The samples were collected from all of the patients who admitted to the outpatient clinic of the Dermatology Department with skin lesions and examined for leishmania. The samples were collected by thin needle aspiration method, from the face and extremities of the patients, from the side of the lesion suspected of leishmaniasis (0.1 ml sterile saline was injected into the skin from the base of the lesion and then drawn by lightly pumping and disseminated by 0.1-0.2 ml sample). The collected samples were sent to the laboratory for examination.

A punch biopsy was taken from the lesions and sent to the pathology laboratory (under sterile conditions, 1-2 sample pieces were taken from the area where the lesion adjoined the healthy skin, and

placed in 1-2 ml sterile saline to prevent drying). After staining, microscopic examination was made of the samples and diagnosis was made on visualisation of amastigotes. No culture of the samples or molecular analysis for differentiation of species was made.

RESULTS

These patients include 12 females and 8 males with a mean age of 20 ± 15.43 years (range, 3-48 years). The lesions were determined on the face and extremities and had been present for between 3 months and 3 years. In 2 cases, more than one lesion was determined. The photographs of the patients who gave permission were taken before the treatment. However, some patients did not want to give photographs after the treatment and others stated that they would take the last dose in another province (Case1,2,3,4).

Case1



Case2



Case3



Case4



In the examinations made, the spread and biopsy results were positive in 13 patients whereas it was negative in 7 patients out CL was determined as a result of biopsy in them. Treatment was administered as intralesional meglumine antimoniate (Glucantime®). Intralesional meglumin antimonate treatment was administered to the patients diagnosed with cutaneous leishmaniasis, once a week for 10 weeks. The medication was applied to the edge of the lesion until the lesion became white. At the follow-up examinations after treatment, all the lesions in all the patients were observed to have recovered. (Table 1).

Table 1. Clinical and epidemiologic data of the patients

Age (year)	Sex (F/M)	Duration (months)	Biopsy*	Microscopy*
48	F	6-7	+	+
35	F	18	+	-
38	F	6	+	-
34	M	6	+	+
40	M	6-7	+	+
5	F	4	+	+
3	M	12	+	+
10	F	3-4	+	+
40	F	3	+	+
46	M	6	+	+
12	M	24-36	+	-
8	F	3	+	+
17	M	12	+	+
7	F	12	+	-
7	M	6	+	-
6	M	12	+	+
10	F	7-8	+	+
31	F	6	+	-
25	F	6	+	-
21	F	24-36	+	+

* Leishmania pozitif (+), Leishmania negatif (-)

DISCUSSION

Leishmaniasis is a public health problem and is reported to be among the five generally most widespread parasitic diseases throughout the world. According to the World Health Organisation (WHO), Leishmaniasis is classified as a major tropical disease, which affects 12 million people and of which approximately 2 million new cases per year are seen, mostly in developing countries (11).

VL infection is caused by *Leishmania infantum* and a total of 413 cases has been reported, between 2000 and 2014, in Turkey, (9). CL type of the disease is caused by *Leishmania tropica* and endemic especially in Şanlıurfa, Osmaniye, Adana, Hatay, and Aydın and followed by Afyon, Muğla, Kahramanmaraş, and Mersin, (12). A total of 29,845 CL cases were reported between 2000 and 2014. (9) The cases included in this study were resident in Kahramanmaraş province and we found that they have not left the province from the patient histories. In this respect, we accepted that these cases are indigenous cases. However, since PCR was not carried out on the samples, the species could not be identified.

Visceral leishmaniasis (VL) and cutaneous leishmaniasis (CL) was diagnosed through the visualisation of amastigotes in samples taken from blood, bone marrow, spleen, liver, lymph glands or the lesion after staining with Giemsa or from parasite proliferation in culture (13,14). In the current study, diagnosis was made from samples taken from the lesion.

Clinically, CL is classified in 3 types, including acute, chronic and residual. Acute CL lesions heal with scarring within 1-2 years. The lesions that last longer than two years are called chronic CL (15). The cases in this study were accepted as acute CL, because the lesions were present for several months to one year.

Anti-leishmanial medications such as sodium stibogluconate, miltefosine, paramomycin, amphotericin B and pentamidine are used in the treatment of leishmaniasis (16). Sodium stibogluconate (Pentostam®) and meglumine antimoniate (Glucantime®), which are 5 valency antimony derivatives, were developed in 1940 and are the primary medications used in the treatment of VL and CL in Turkey and throughout the world. However, various researchers have reported that resistance has developed to these medications (6). In the current study, intralesional meglumine antimoniate was used and recovery was observed in the cases.

The current study was planned as the first systematic sampling epidemiological study in the region with respect to data reports of previously evaluated reporting the data of evaluated CL cases.

CONCLUSION

By defining the status of CL in the region, the study can be considered to contribute to the

planning of methods of intervention, public health education and personal preventative precautions.

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