

FIELD MEDICINE**PATTERN OF CUTANEOUS LEISHMANIASIS CASES
AMONG TROOPS AND THEIR FAMILIES IN SIBI**

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ABSTRACT

Objective: To determine the pattern of cutaneous leishmaniasis cases in Sibi and to form a base line data.

Design: Single center descriptive study.

Place and Duration of Study: From Jan 2003 to Oct 2004 in CMH Sibi.

Patients and Method: A total of 293 patients of either age or sex with clinical features of cutaneous leishmaniasis or positive skin smear for LD body were included in the study.

Results: Out of 293 cases 283 (96.6%) were male patients and 10 (3.4%) were females. Mean age of presentation was 30 years. Number of lesions ranged from 1-14. Multiple lesions were seen in 40.9% cases only. Size of lesions ranged from 1-6 cm and most common size was 1 cm. 70% of lesions seen on upper and lower limbs followed by trunk and abdomen 15%, face 14% and genitalia 16%. Most common morphological pattern was non healing ulcer in 273 (93.17%) cases. Dry type was seen in 20 (6.8%) cases only. No overlap with visceral leishmaniasis was seen.

Conclusion: Cutaneous leishmaniasis is quite prevalent in Sibi cantonment of Balochistan province of Pakistan. Most common presentation is non healing ulcer followed by psoriasiform rash. Majority of reasons were wet type but dry lesions were also seen. There is need to carry out further studies to identify where some different strain of parasite is involved.

Keywords: Cutaneous leishmaniasis, morphology pattern, wet type

INTRODUCTION

Cutaneous leishmaniasis (CL) is a chronic protozoan disease caused by various species of parasite leishmania and transmitted to humans by the bite of infected sand fly. *Phlebotomus papatasi* and *Phlebotomus salehi* is the vector and wild rodents and dogs serve as the reservoir of infection [1]. The disease is endemic along our entire western border, northern area of Balochistan and Sindh.

Previously it was confined to India, China, Middle East, Southern Europe and South America. Now it is recognized in all

continents of the world except Australia and Antarctica. The World Health Organization (WHO) estimates that there are 400,000 new cases each year [2].

The parasite exists in two forms: an amastigote in the mammalian host, and a flagellate promastigote in the insect vector. Leishmaniasis is not a single entity but comprises a variety of syndrome, due primarily to a variety of parasites affecting different population and each related to a characteristic vector and animal reservoir. The clinical spectrum is so wide that it ranges from asymptomatic infection, mucocutaneous destruction and visceral variant which begin insidiously and terminates in death if left untreated [3].

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Because of sub-clinical infections and exposure in child hood local adult population of the area is immune to the disease where as adults are the usual patients among the non natives. In an endemic area it is adequately diagnosed by its clinical appearance [3]. Diagnostic challenge arises when the lesions appear in non endemic area, when superadded infection or local remedies alter its clinical appearance, or any atypical variant is seen. In past, the diagnosis of CL in our country was based mostly on its clinical presentations as the facilities for histological and laboratory diagnoses were scanty. Now skin smears, histopathological diagnosis and even PCR for identification of parasite has become available at various centers in Pakistan [4].

The hall mark of cutaneous Leishmaniasis is skin lesion which can heal in 6-12 months time. The duration of lesion varies between different species. Early clinical recognition, confirmation by tissue smear or histopathology, followed by chemotherapy result in good clinical outcome.

The present study was conducted to determine the clinical spectrum of cutaneous leishmaniasis cases in Sibi in Military persons and their families and to form a base line data.

PATIENTS AND METHOD

All Patients reporting to CMH Sibi from July 2003 to October 2004 of either age or sex with clinical features of cutaneous Leishmaniasis were included in the study. Out of 350 patients screened 293 patients selected for the study fulfilling the inclusion and exclusion criteria. Diagnosis of lesion was made mainly on clinical features and skin smear testing. All doubtful lesions of less than four week duration that were skin smear negative were given a course of antibiotics to rule out bacterial cause of ulcer.

Inclusion Criteria

- Patients of all ages and sex
- Residing in an endemic area

- Clinical features compatible with disease including nodule, plaque, and non healing ulcer
- Positive skin smear for LD body
- Response to antimonial compounds

Exclusion Criteria

- Doubtful lesions
- Failure to follow up

RESULTS

A total of 293 patients were included in the study. Male constitute the predominant group 283 (97%) followed by female patients 10 (3%). Mean age of the patients was 30 years ranged from 7 to 66 years. Number of lesions ranged from 1-14 and most of the patients having only one lesion. Multiple lesions were seen in 120 (41%) cases. Size of the lesions ranged from 1-6 cm and most common size was 1cm. Seventy percent of lesions seen on lower and upper limb followed by 14% lesions on face, 15% each on trunk and abdomen and 1% on genitalia. Skin smear was positive for LD body in 88 (30%) cases

Morphological Pattern

Most common presentation was Non healing ulcer in 273 (93.17%) cases followed by psorasiform plaque in 20 (6.83%) cases. In all the wet type cases it started as a papulonodular skin lesion , gradually enlarged and ulcerated in 1- 2 month time, before ulceration the lesion had a dome shaped appearance and soft margins. Satellite lesion and sporotrichoid pattern seen in 6 (2%) cases only (fig. 1-3). No paronychia, whitlow or chancriform variety seen. Lymph adenopathy was not seen in any patient but lymphatic spread in the form of cord like thickening seen in 6 (2%) cases and lymph edema seen in one female patient only.

Dry type lesions consist of psorasiform plaque in 20 (6.8%) cases. No other form like erysepid or eczematous seen. The color of lesion was reddish brown and size range from 1-6 cm. None of the patients exhibited lesion of chronic cutaneous liehmaniasis. Most of the lesions were up to 20 weeks duration .No

over lap with visceral leishmaniasis seen. None of the patients had systemic symptoms like fever weight loss or anemia.



Fig. 1: Satellite Lesion.



Fig. 2: Multiple Lesions over Trunk.



Fig. 3: Sporotrichoid Pattern.

DISCUSSION

The cutaneous disease was recognized by Avicenna in the Middle East and Persia. Record of oriental sore made by Muslim scholars is as early as tenth century [1].

Cutaneous Leishmaniasis is prevalent world wide, a chronic disorder with potential of local destruction and disfigurement [2]. It is endemic in various regions of Pakistan, the high prevalence of its cases in Military and Paramilitary person deployed in Balochistan is a major health related issue [3]. The data regarding epidemiology of the disease is fragmentary and no correct baseline data is present for comparison that is why we conducted the present study to see the different pattern of CL in military person serving in an endemic area

Males are infected more often than females just like previously quoted [2-5] because of increased number of adult male military population in Sibi and doing training, working and games outdoor which increases their exposure to sand flies.

The increase in incidence is really alarming previously no study from Balochistan had so many patients [5], Rahman et al had 58 patients from Balochistan and we had 293 in a single center. This could be due to inadequate preventive measure, lack of awareness in the troops and favorable climate for sandflies [5]. In intense heat of Sibi the insects may find suitable shelter in cracks of mud plastered walls and wild dogs act as reservoir of infection which was abundant in the area.

Systemic symptoms were generally absent just like previous studies [3,5]. An unusual thing was that most of our patients had single lesions as compared to previous studies and one possible explanation is probable different strain of sand fly which requires further investigation and secondly early access to health care facilities and better awareness in troops for early reporting of any unusual skin lesions.

Last year maximum number of cases was seen during October to December and could be due to the de-escalation of troops from borders to peace location in July 2003. Most common pattern was wet type lesion like previously reported [5], followed by dry type which had not been previously reported from

Balochistan which require further confirmation and identification of parasite [5-6].

Distribution of lesion was same for upper and lower limbs but an increase in lesion on trunk and abdomen 15% as compared with 6% in previous study [5]. One possible explanation could be increase environmental temperature in Sibi forcing soldiers to work and sleep in vest or just in shorts [6-7].

Prevention and control of arthropod vector borne diseases can only be effective if information of habitat of arthropod vector, modalities of transmission and factor facilitating transmission are known [7]. Studies of geographical features like terrain, cracks and crevices in mud plastered home, which act as breeding place of insect vector, should also be done by local health care staff for effective elimination of disease [8]. So by providing clean environment, filling of crevices killing of adult fly by regular spraying and using sand fly nets be employed religiously to prevent the spread of this disease.

Leishmaniasis is a disease having strategic importance; a lot number of patient's world wide belongs to Armed Forces and UN peace keepers and this could have a negative effect on the morale of troops [8-9]. A scientific, sound, and realistic effort is required from top to bottom to stop the spread of this disease, and new challenges should focus on development of vaccine, rapid diagnostic test and oral therapy which should be safe effective and affordable against this disease [10-11].

CONCLUSION

Cutaneous leishmaniasis is common in Baluchistan province including Sibi cantonment. Wet type is the most common variety but dry type lesion are also seen which require further confirmation and identification of parasite.

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