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**Proinflammatory cytokine gene variants and susceptibility to visceral leishmaniasis**

A. Moravej1∗, M. Rasouli2, M. Kalani3, S. Asaei2, Y. Mansori1

1 Fasa University of Medical Sciences, Fasa, Iran, Islamic Republic of  
2 Shiraz University of Medical Sciences-Clinical Microbiology Research Center, Shiraz, Iran, Islamic Republic of  
3 Immunology Department, Clinical Microbiology Research Center-Shiraz University of Medical Sciences, Shiraz, Iran, Islamic Republic of

**Background:** Lymphotoxin-α (LT-α), interleukin-6 (IL-6) and interleukin-1beta (IL-1β) are proinflammatory cytokines playing important roles in immunity against Leishmania infection and the outcome of the disease. As cytokine productions are under the genetic control, this study tried to find any probable relationship between these cytokine gene polymorphisms and the susceptibility to visceral leishmaniasis (VL) in Iranian pediatric patients.

**Methods:** 95 pediatric patients involved with visceral leishmaniasis and 128 non-relative healthy people, from the same area as the patients, were genotyped for LT-α (+252 A/G), IL-6 (-174 C/G) and IL-1β (+3953 T/C and -511T/C) gene polymorphisms using polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP).

**Results:** There was not found any significant differences in allele and genotype frequencies of LT-α (+252 A/G), IL-6 (-174 C/G) and IL-1β (+3953 T/C and -511T/C) among the study groups. However, the frequency of IL-1β -511TT genotype was higher in the controls (P = 0.0004) while the frequency of IL-1β -511CC genotype and C allele were higher in the patients (P = 0.0008 and P = 0.00006, respectively). Furthermore, IL-1β CC (-511/+3953) haplotype was more frequent in VL patients compared with the controls (P = 0.0002) and the distribution of TT haplotype was higher in controls compared with the patients (P = 0.003).

**Conclusion:** Based on the results IL-1β -511C allele, CC genotype and CC (-511/+3953) haplotype could be considered as the susceptibility factors for visceral leishmaniasis while IL-1β -511TT genotype, T allele and TT haplotype (-511/+3953) might be counted as the influential factors for resistance to the disease.

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**Malaria: incidence, clinical profile, complications, treatment options: study from a rural medical college hospital in south India. (Any case of fever is malaria until proven otherwise: still holds true in India!**

N. Nanjundaiah1∗, P.K. Reddy2, Y.J.V. Reddy, 3

1 P.E.S INSTITUTE OF MEDICAL SCIENCES AND RESEARCH, KUPPAM, Chittoor., ANDHRA PRADESH, India  
2 P.E.S INSTITUTE OF MEDICAL SCIENCES AND RESEARCH, Kuppam., India  
3 P.E.S INSTITUTE OF MEDICAL SCIENCES AND RESEARCH, Kuppam, Chittoor district, India

**Background:** Malaria is the commonest parasitic infection in India. The National Vector Borne Disease Control Programme (NVB-DCP) reports 2 million parasite positive cases a year. The WHO estimates 100 million cases in the south East Asian Region, 70% of these in India. Independent studies by the Indian Council of Medical Research have unequivocally established that malaria incidence is hugely under-estimated.

Epidemiology is complex because of geo-ecological diversity, multi-ethnicity, and wide distribution of anopheline malaria. The country wide presence is facilitated by inter-and intra-state population movement.

A shift in the clinical profile in patients with complicated malaria has been observed with multiple organ dysfunction becoming a common feature.

Anti-malarial drugs available include chloroquine, quinine, and artesiminin compounds.

**Methods:** To assess the incidence of malaria, clinical profile and course of the disease, and response to different treatment options available.

All cases of confirmed malaria, clinically diagnosed malaria and treated with anti-malarial drugs from January 2011 to December 2011 were analysed for fever pattern, clinical features, hospitalization, complications and mortality rate.

**Results:** A total of 174 cases were diagnosed / treated as malaria. 93 were male and 81 female. Complicated malaria was seen in 38 cases (21.83%) with positivity in 20 cases. Mortality was 04.59% of clinical malaria cases, all admitted with multiple organ dysfunction syndrome, no mortality in confirmed cases. Of the remaining 136 cases malarial was confirmed in 42, while 94 were clinical malaria. 18 were positive for P.falciparum, 18 for P.vivax. 6 patients were positive for both falciparum and vivax. All patients were treated with anti-malarial with recovery. Chloroquine was used in those diagnosed as clinical malaria, followed by quinine and Artemesin in both clinical and confirmed cases depending upon the clinical severity.

**Conclusion:** Malaria was positive in only 35.63%, remaining being clinically / therapeutically proven malaria cases. Clinical malaria patients had palpable spleen as clinical sign, along with fever, chills and rigors.

Clinical suspicion and early initiation of treatment helps in recovery.