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Background: Evolving epidemiologic circumstances have contributed to an explosive increase in the number of American Cutaneous Leishmaniasis (ACL) cases reported in Colombia from under 3000 in 2001 to over 20,000 in 2006. Since host age and Leishmania species are considered to be important determinants of therapeutic response in ACL, knowledge of the age-specific distribution of disease and species identity in different epidemiologic settings is crucial for effective treatment protocols.

Methods: We analyzed the clinical databases of three CL clinics: Chaparral, Tolima (Outbreak Setting), CIDEIM, Tumaco (Endemic Setting) and CIDEIM, Cali (Referral Center). The age and gender distribution of cases at the three sites was described (mean, median, mode, interquartile range) and compared. Isolates obtained at diagnosis between 2004 and 2006 were identified to the species level by monoclonal antibody typing and isoenzyme electrophoresis. The age specific therapeutic response rates to Glucantime® in Chaparral, where patients are actively followed, were calculated.

Results: Cases included: 2800 in Chaparral (2003-2006), 970 in CIDEIM-Cali (1989-2005) 1678 in Tumaco (1989-2005). Different age and gender distributions characterized the sites. The median age distribution was significantly different (p<0.00001 Mann/Whitney Test), as well as the mode (Chaparral 11 years, CIDEIM-Cali 20 years, CIDEIM Tumaco, 1 year) and interquartile ranges. The proportion of children (≤15 years) is significantly higher in Tumaco (0.44) and Chaparral (0.37) than in Cali (0.09, p<0.01). The relative risk of treatment failure for children aged 0 to 5 years was 2.09 (95%CI 1.55-2.80) compared to adults (16-60 years of age) and 1.55 (95%CI 1.13-2.11) compared to children 6-15 years of age. The frequency distribution of Leishmania species also varied among sites. Tumaco (n=355): 96% L. panamensis, 2% L. braziliensis, 2% L. Viannia sp (non reactive to species specific monoclonal antibodies, pending isoenzyme analyses); Tolima (n=54): 74% L. Viannia sp, 31% L. guyanensis, 7% L. panamensis; Cali (n=137): 74% L. panamensis, 17% L. Viannia sp, 8% L. braziliensis, 1% L. guyanensis.

Conclusions: The patient age and Leishmania species distributions differ among the epidemiologic settings included in this study. These findings are important for the future evaluation of therapeutic options as well as for choice of treatment for the affected populations.