WORLD 6LEISH
6th World Congress on Leishmaniasis
16th - 20th May 2017
DNDi
PLOS COLLECTIONS

C0187 PREVALANCE OF LEISHMANIASIS AMONG PATIENTS IN A RENAL UNIT IN AN AREA WHERE CUTANEOUS LEISHMANIASIS AND CHRONIC KIDNEY DISEASE OVERLAP IN SRI LANKA

Chandrani Menike[1], Renu Wickremasinghe[1], Rajeewa Dassanayake[2], Janani Dassanayake[1], Sachini Kahatapitiya[1], Indira Wijesiriwardene[3], Indika De Alwis[4], Shalindra Ranasinghe[5]

[1]*Department of Parasitology, Faculty of Medical Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda Sri Lanka*
[2]*Nephrology Unit, Teaching Hospital, Anuradhapura Sri Lanka*
[3]*Department of Pathology, Faculty of Medical Sciences, University of Sri Jayewardenepura Sri Lanka*
[4]*Blood Bank, Provincial General Hospital, Ratnapuara Sri Lanka*
[5]*Shalindra Ranasinghe Nugegoda Sri Lanka*

1 Background

Visceral leishmaniasis (VL) complicating kidney transplantation (KT) is reported globally. Patients with chronic kidney disease (CKD) and KT are frequently placed on immunosuppressive therapy and subjected to repeated blood transfusions to manage renal complications. Cutaneous leishmaniasis (CL) due to *Leishmania donovani* is an established disease in Sri Lanka. We also report increasing numbers of CKD and KT patients from same geographic areas. The aim of this study was to assess the prevalence of anti-*Leishmania* antibodies and amastigotes in blood among diagnosed patients with CKD and patients who had undergone KT, and to assess the correlation of blood transfusion and immunosuppressive therapy in the same group.

2 Methods

Patients (n=170) were enrolled from renal clinics and renal ward, Teaching Hospital, Anuradhapura. These patients were diagnosed of having CKD based on the Kidney Disease | Improving Global Outcomes (KIDGO) 2012 guidelines. Patients with KT had recorded history. History and examination relevant to VL and blood samples were taken with consent.

Blood samples were assessed for presence of anti- *Leishmania* antibodies in serum using rK-39 rapid diagnostic test strip (rK-39 RDT), rK-39 ELISA and Direct Agglutination Test (DAT). Buffy coat films stained with Giemsa's were examined for presence of amastigotes.

3 Results

None of the patients had past or current history suggestive of CL or VL. All 170 patients were negative for *Leishmania* amastigotes in buffy coat smears and rK-39 RDT. Two (1.2%) Patients showed marginal positivity (Mean OD values layed between the cut off positive value and positive control) with rK-39 ELISA and another 02 (1.2%) gave positive titres at 1: 6,400 and 1: 3,200 dilutions with DAT. Patients those who showed positivity with ELISA did not show positive results with DAT and vice versa. This could be due to known poor correlation between rK-39 ELISA and DAT when antibody titres are low. All 4 of these patients had CKD and had a history of receiving blood transfusions. None of the patients on immunosuppresive therapy were positive.

4 Conclusions

The weak positivity of anti-*Leishmania* antibodies in 4 patients (2.4%) would suggest that they were most likely to be asymptomatic VL careers. Possible risk factors could be unscreened blood transfusions or infective sandfly bites. Since CKD patients with a history of CL were not encountered in this study population, the possibility of CL visceralization with immunosuppression could also not be ignored.

Acknowledgements: ASP/01/RE/MED/2015/45 and University of Sri Jayewardenepura Overseas Travel Grant