

Sensitivity and Specificity of ELISA in Detection of Microfilariae

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Abstract

Background: Filariasis is a global problem and India has a major burden of disease in states like Andhra Pradesh, Odisha, Tamil Nadu, Kerala, Bihar and Uttar Pradesh. We tried to evaluate the Sensitivity and Specificity of ELISA for detection of microfilariae in Govt General Hospital, Guntur District of Andhra Pradesh. **Methods:** 100 samples were collected from those attending the filarial clinics under the control of district filarial officer were designated as Group A. 10 normal serum samples [Group B] and 10 serum samples (endemic normal) [Group C] from normal individuals in the endemic pockets identified by filarial control program officers which were detected smear negative were collected as controls. **Results:** Comparing the sensitivity and specificity of ELISA test between all groups Sensitivity of ELISA was calculated to 94% with Confidence Interval (CI 87.4 – 97.77%) and Specificity of 70% (CI 34.75 % - 93.33%). The positive likelihood value is 3.13 (CI 1.21 – 8.09) and negative likelihood value is 0.09 (CI 0.04 to 0.21) **Conclusion:** Antigen detection by ELISA has superior sensitivity and specificity in the diagnosis of filariasis both acute and chronic cases and occult filariasis which were failed to be diagnosed by smear examination alone.