Detection of Human filarial parasite *Brugia malayi* in dogs in Sri Lanka

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A significant number of patients with lymphatic filariasis are reported each year in Sri Lanka. The causative agents of this disease are *Wuchararia brancofty* (75%), *Brugia malayi* (25%). It is a disease that can lead to long term and permanent disability, WHO (1995) has targeted for the elimination of this disease by year 2020.

In the year 2006 many *Brugia malayi* positive people were detected from Puttalam and 2013 from Gampaha district screening of night blood film. As a *Brugia malayi* is transmitted by cats and dogs in Thailand, *B. malayi*, which was suggested as zoonotic in Sri Lanka by Dissanaike (1979). Director anti filaria campaign searched whether there is possibility of transmission *Brugia malayi* by dogs. The present work was carried out to find out the incidence of microfilaria in dogs and also to detect the presence of human filarial infection in dogs if any.

According to the statistical analysis randomly selected 570 dog samples that include 400 domestic, 170 stray and community dogs were examined for microfilariae by wet film Examination. in the western province of Sri Lanka Positive cases were subjected to Giemsa staining and molecular techniques. Results of the study showed that 39% of dogs had microfilariasis; out of which 14% had sheathed microfilaria. Among domestic dogs 23% and among stray and community dogs 44% had sheathed. Microfilaria, since this is the first observation of morphologically identical human micro filaria in Sri Lanka and confirmed the species identification use in Molecular detection (PCR) confirmed it as *B. malayi*.

The study carried out showed that some of the dogs enrolled in the study had micro filaria which is morphologically identically to that of *B. malayi* and PCR and gene sequencing confirmed same in human infection. Present study further confirm the possible role of dog as the reservoir for human filarial warm *B. malayi*, high prevalence, so the peoples are at high risk of getting filariasis.

Control of zoonotic filariae in the canine reservoirs would be of great veterinary and medical interest and could contribute to a decrease in human filariasis in endemic countries.