

Prevalence of Tuberculosis in Keepers of Captive Elephants in Sri Lanka: A Preliminary Study

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Captive elephants, numbering approximately 120 at present, are compelled to participate in functions, in which close interactions with humans are frequent. The diagnosis of the first captive elephant with clinical tuberculosis (TB) suggested that the infection was probably transmitted from the elephant keeper. In addition, mahouts frequently consume alcohol and smoke which are known risk factors for TB. The objective of this study was to screen keepers of captive elephants in Sri Lanka for tuberculosis.

In August 2010 keepers of 92 captive elephants brought to Kandy for the Asela Perahera were screened for clinical symptoms and signs of tuberculosis. Those who had clinical evidence of chest infection were referred to the chest clinic for Mantoux test, chest X-rays and sputum smears for Acid Fast Bacilli (AFB) for confirmation of TB.

Although 20 out of 78 keepers, 20 keepers with clinical evidence of chest infection were referred to chest clinic, only five reported to the chest clinic. None of them were positive for AFB and two showed a positive Mantoux reaction (>10mm), but chest X-rays did not show evidence of active TB. Therefore, they were diagnosed as latent TB infections. One keeper had clinical and radiological features strongly suggestive of TB and was diagnosed as smear negative pulmonary TB.

One out of 78 diagnosed with TB is a substantially high rate compared to the national tuberculosis prevalence of 1 per 1000 Sri Lankans. Two elephant keepers, with latent TB infections and positive Mantoux tests have a 10% lifetime risk of developing active TB. It is well known that TB infected individuals can show negative results to all laboratory tests because the sensitivity of sputum smear is not 100%. It is strongly recommended that those keepers who did not come for review should be followed up.

The findings of this study show that the prevalence TB among keepers of captive elephants is higher than the prevalence in Sri Lankan population. It is important to screen all keepers regularly if elephants are to be protected from contracting TB. Most keepers did not comply with medical advice possibly because they are afraid of losing their current minimal social acceptance if they were detected as TB patients.