Letter to the Editor

Prevalence of helminth ova in soil samples from public places in Shiraz

Sir,

We read with great interest the article by Motazedian et al. entitled “Prevalence of helminth ova in soil samples from public places in Shiraz” published in the Eastern Mediterranean Health Journal, 2006, 12(5):562–5 [1]. On the basis of their findings, the authors reported Toxocara cati ova in 7 (6.3%) soil samples after examination by light microscopy. However, the methodology was not clearly described to understand how T. cati were differentiated from other Toxocara species, which is difficult using light microscopy. Therefore, we have some concerns about the methodological aspects of the study and the conclusions drawn.

Several studies have indicated that light microscopy is unable to differentiate Toxocara eggs isolated from soil specimens by size [2–4] and light microscopy is not helpful in the differentiation of T. canis and T. cati eggs [5]. Furthermore, the differentiation of T. canis and T. cati eggs on the basis of morphological features is difficult and inconclusive. Uga et al. [5] concluded that 89% of T. canis and 67% of T. cati eggs could be differentiated morphologically by considering the shape and size of the pits and their surrounding albuminous elevation using simple light microscopy. Reliable methods for identifying species of embryos from soil-isolated eggs during routine environmental studies are equally difficult or lacking. Therefore, given the small sample size in Motazedian et al.’s study, it would not have the power to detect contamination by T. cati eggs in soil samples. Although as indicated above, egg size alone is not helpful in such studies and not a good criterion for the differentiation of T. canis and T. cati eggs, the authors do not appear to have measured this to use in conjunction with other criteria.

Moreover, both T. cati and T. canis have been reported from cats and dogs in Shiraz [4,6]; so, it is possible to find both T. cati and T. canis eggs from soil in this region. Thus, without reliable methods for differentiation of the species, it is difficult to conclude with certainty that the isolated ova are T. cati.

To date several studies have been carried out to differentiate Toxocara spp. eggs using electron microscopy approaches rather than light microscopy [7–9], which is a superior technique.

On the bases of these observations, it can be argued that the conclusions reported by the authors are not entirely supported by their results.

References


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Dr Motazedian and colleagues were invited to respond to this letter, but they did not do so.