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.