

A Note On Survival Of Infective Stage Larva Of Gnathostoma Spp. In BME Culture Medium

S Soogarun, J Suwansaksri, V Wiwanitkit

Citation

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Abstract

Dear editor, human gnathostomiasis is an important tropical parasitic infection (1). The major manifestation as nodular migratory eosinophilic panniculitis is suggested for this disease. More severe presentations, resulting from visceral larva migrans, such as ocular and CNS gnathostomiasis are also reported. The diagnosis is confirmed by identification of the parasite from the pathological specimen. However, it is difficult to get the histological diagnosis, therefore, the immunological diagnosis for this infection is necessary.

At present, *Gnathostoma spinigerum* third stage larvae (L3) antigen is necessary for Western blot analysis in the diagnosis of Gnathostomiasis (2,3). Acid pepsin solution is required for digestion of eel's liver (*Fluta alba*) to yield the larvae for antigen preparation. However, the specific antigen is excretion secretory (ES) antigen, which can be derived from viable larva. Since the larva start to degenerate within a short period, therefore, the larva derived from digestion must be used before its death. Here, we reported our result in using the BME culture medium for cultivation of the derived larva to prolong the period of usage of the harvested larva in antigen preparation.

We used 48 L3 harvesting from standard acid digestion of

eel's viscera as described in our recent report (4) for this experiment. These larva were culture in BME culture medium (Gibco, Grand Island, N.Y., U.S.A.): preparation of this medium was done by using one pack of BME powder (9.2 gm) dissolved in 1 litre of distilled water and adjusted to pH 7.2-7.4 by NaHCO₃. Sterilization was done by 0.45 µm millipore membrane filtration. Of interest, after a week of cultivation, we could detect 41 survived L3 giving the survival rate of 85.4 %. Therefore, using the BME culture media for cultivated of the derived L3 from pepsin digestion can help prolong the period in using the L3 for antigen preparation.

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Author Information

Suphan Soogarun

Department of Clinical Microscopy, Faculty of Allied Health Sciences, Chulalongkorn University

Jamsai Suwansaksri

Department of Clinical Chemistry, Faculty of Allied Health Sciences, Chulalongkorn University

Viroj Wiwanitkit

Department of Laboratory Medicine, Faculty of Medicine, Chulalongkorn University