

Documents

Lek-Uthai, U., Passara, R., Roongruangchai, K.

Morphological features of Acanthamoeba causing keratitis contaminated from contact lens cases.
(2009) *Journal of the Medical Association of Thailand = Chotmaihet thangphaet*, 92 Suppl 7, pp. S156-163.

Department of Parasitology and Entomology, Faculty of Public Health, Mahidol University, Bangkok, Thailand.

Abstract

To study the morphological characteristics of genus Acanthamoeba which is an opportunistic organism associated with wearing contact lenses that the biofilm phenomenon in contact lens cases contained Acanthamoeba causing keratitis by conventional culture technique. A total of 150 contact lens cases were biofilm scraped in March till September 2007, at an institution in Nakhornpathom Province, Thailand. The 'gold standard' culture technique was used for the excystation growth development observation. Cysts of Acanthamoeba spp. contained 50 microlitres of Escherichia coli and contact lens solution were incubated and observed for the presence of cysts and/or trophozoites for 12 days. An infected slide was stained with giemsa solution and other non-stained and non-fixed slides were carried out for morphological characteristics study by different microscopes. The prevalence of Acanthamoeba spp. in scraping of contact lens cases was 6.7% (10/150). These Acanthamoeba isolates at temperature around 37 degrees C were consisted of all three groups, which in summary; the average diameter of cysts in Astronyxids (group I) was relatively large. They were > or = 18 micrometers, while those of Polyphagids (group II) and Culbertsonids (group III) were < or = 18 micron. The typical morphology of Acanthamoeba trophozoites moving freely in water were recognized by the presence of lobopodium and acanthopodia within 12 observed days. The average size of Acanthamoeba trophozoites was in the range of 12-45 micron. Three different images of cyst were feature studied. Three Acanthamoeba groups by biofilm scraping from contact lens cases should be differentiated. Morphological characteristics cysts and trophozoites should be confirmed. In addition, to improve contact lens wearer education, compliance with contact lens cases, hygiene recommendations and regular disposal of contact lens cases might help to solve contact lens cases.

Document Type: Article

Source: Scopus

About Scopus

[What is Scopus](#)
[Content coverage](#)

About Elsevier

[About Elsevier](#)
[Terms and Conditions](#)
[Privacy Policy](#)

Customer Service

[Help and Contact](#)
[Live chat](#)

