Does the capsule component of the Cryptococcus neoformans glucuronoxylomannan impair transendothelial migration of leukocytes in patients with Cryptococcal meningitis? (letter)
Lipovsky, M.M.; van Elden, L.J.R.; Walenkamp, A.M.E.; Dankert, J.; Hoepelman, A.I.M.

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Reply

To the Editor — We commen e ha our findings [2]. As originally sa ed, we failed o find an associa ion of serum reac ivi y wi ha clinical profiles, including pai age or sex or dura ion, si e, or number of mulluscum lesions. Al hough T hompson did no repor a correla ion be ween he rela i ve an idy i er in hei ELISA sys em and clinical sympoms [3], we hink i should be no ed ha 1 of he weakly posi i ve sera lacked reac ivi y wi ha 33/35-kDa polypep ides [1]. These resul s sugges ha he ypes of an idy may differ accord ing o hei reac ivi y measured by ELISA. Fur her, longi ual sudies wi ha a large populia on is necessary o clarify he clinical significance of he wo ypes of an idy.

Unfor una ely, we did no puﬁy mulluscum con agiosum virus (MCV) virions separa ely, since i was our purpose o ob ain a suﬁcien amoun of viral DNA o ablish a library. The ac ual propor ions of MCV sub ypes 1, 1v, and 2 in our pooled samples remains unknown. However, we hough ha mos of our samples consis ed of MCV 1v becauses a previous lar e epidemiologic sudy revealed ha sub ype 1v accoun ed for 96% of he s rains iso la ed in he Tokyo area [4], and we previously es ablished a genomic library of MCV 1v [2]. I appears ha he pu ly bu discrimina e minor differences in molecular masses when various iso la es are compared on he same polyacrylamide gel. In addi ion, we do no hink i is appropia e o es im a he molecular masses of pro eins wi ha ~70 and ~34 kDa on he same polyacrylamide gel. Thompson [1] poin ed ou ha he size of larger an idy polypep ides may have been underes ima ed (ﬁgures 1, 2, and 6 in [2]), which could be due o he use of higher percen age acrylamide. We repea edly performed elec rophoresis using gels a differen concen ra ions and ﬁnally de ermined he molecular masses of wo an idy major polypep ides.

Oda e al. [5] analyzed he s ucal polypep ides of MCV by SDS-PAGE. They found ha only wo polypep ides, designa ed A and D, which were coinciden ally demons ra ed o be wo major an idy polypep ides [2], among seven major polypep ides differ ed in hei mobili y on acrylamide gel accord ing o he iso la es. Assuming ha , as Thompson repor ed [1], he variabili y of he wo a n idy depends on he ypes of MCV DNA, i might be immunologically impor an idy becauses MCV may have undergone changes in i surface pro eins during he evolu ionary process in respon e o he hos. However, i remains o be clariﬁed why each of he polypep ides A and D is recognized as a wide, blurred band, ra her han wo discrete e bands, when pooled un yped MCV are analyzed on SDS-polyacrylamide gel [5]. We believe ha some unknown fac ors o her han sub ypes of MCV DNA par icipa e in he divergen e of wo an idy polypep ides.

Takahiro Watanabe, Shigeru ori kawa, Kenji Suzuki, Tatsuo iyamura, Kunihiko Tamaki, and Yoshiaki Ueda

Departments of Virology II, Virology I, and Pathology, National Institute of Infectious Diseases; Department of Dermatology, Faculty of edicine, University of Tokyo, Tokyo, Japan

References


Reprin s or correspondence: Dr. C. Thompson, Dep . of Infec ious Diseases, Level 6, Blackburn Bldg. (D06), Universi y of Sydney, Sydney, NSW 2006, Aus ralia (carol @infdis.usyd.edu.au).

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Does the Capsule Component of the Cryptococcus neoformans Glucuronoxylomannan Impair Transendothelial Migration of Leukocytes in Patients with Cryptococcal meningitis?

To the Editor — The encapsula ed yeas -like fungus Cryptococcus neoformans is he leading cause of mycological infec ion of he cen ral nervous sys em in pai sen wi ha compro mi sed cell-media ed immuni y [1]. Recen ly, we demons ra ed ha he cerebrospinal ﬂuid (CSF) of pai sen wi ha he cryptococcal meningi is is con ains high levels of he neu rophi h mecha ra ac an in erleinik (IL)-8, despi e he fac ha he CSF con ains neu rophil [2]. The cryptococcal capsular polysaccharide glucuronoxylomannan (GXM) is presen in serum and CSF of pai sen wi ha he cryptococcal meningi is, and GXM is known o in eﬀere wi ha he neu rophil migra ion [3]. We demons ra ed ha in vi ro ha GXM is capable of inducing he produc ion of IL-8 by hea cells, and i also prevens neu rophils from migra ing oward IL-8 [4]. Consequen ly, a high ra io of GXM in serum and CSF wi ha he CSF neu rophils e cell coun in pai sen wi ha he cryptococcal meningi is. Therefore, we compared he re epec ively he GXM i ers in serum and CSF wi ha he CSF neu rophils e cell coun o 35 Du ch human immunodeﬁciency virus—infec ive pai sen wi ha a cul ure-pro ven diagnosis of cryptococcal meningi is be ween 1986 and 1996.

Am igen i ers for he pai sen s were measured wi ha commer ci al ki s rou inel y used for diagnos is he de ce ecion of cryptococcal an igen
Figure 1. Inverse correlation between ratio of leukocyte count in cerebrospinal fluid (CSF) and cryptococcal glucuronoxylomannan (GXM) in serum ([GXM]_{serum}) over those in CSF ([GXM]_{CSF}) in 35 patients with cryptococcal meningitis.

References


Reprints or correspondence: Dr. A. I. M. Hoepelman, University Hospital, Department of Infectious Diseases and AIDS, Division of Infections and Diseases and AIDS, P.O. Box 85500, 3508 GA Utrecht, The Netherlands (I.M.hoepelman@digd.azu.nl).