Does the capsule component of the Cryptococcus neoformans glucuronoxylomannan impair transendothelial migration of leukocytes in patients with Cryptococcal meningitis? (letter)
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Reply

To the Editor—We reacive he commen s of Thompson [1], who kindly provided some da a supplement ary o our findings [2]. As who provided a ed, we rea i we associa ion of serum reac ivi y wi h he clinical profiles, including pa ien age or sex or dura ion, si e, or number of molluscum lesions. Al hough Thomp- son did no repor a correla ion be tween he rea i ye i er in heir ELISA sys em and clinical sympoms [3], we rea i should be no ed ha 1 of he weakly posi ve sera lacked reac ivi y wi h 33/35-kDa polypep ides [1]. These resul s reac ve ha he ypes of an ibody may differ according o he reac ivi y measured by ELISA. Fur her, longi udinal sudes wi h a large popul a ion is necessary o rea i he clinical signifi cance of he wo ypes of an ibody.

Unfor una ely, we did no puify molluscum con agiosum virus (MCV) virions separa ely, since i was our purpose o ob ain a suffici en amount of viral DNA o es ablish a library. The ac ual propor ions of MCV sub ypes 1, 1v, and 2 in hewo pooled samples remains unknown. However, we rea i ha mos of our samples consis ed of MCV 1v because a previous large epidemiologic sudy revealed ha sub ype 1v accoun ed for 96% of he s rains isola ed in he Tokyo area [4], and we previously es ablish a genomic library of MCV 1v [2]. I reac ve ha he discrimina e mori nes in molecular masses when various isola es are compare d on he same polyacrylamide gel. In addi ion, we do no rea i ha 1 of he weakly posi ve sera lacked reac ivi y wi h he divergence of he wo an igenic polypep ides.

Oda e. al. [5] rea i he nu ural polypep ides of MCV by SDS-PAGE. He found ha only wo polypep ides, designa ed A and D, which were coinciden ally demons ra ed o be wo ma jor an igenic pro ions [2], among seven major polypep ides differed in heir mobil i y on acrylamide gel according o he isola es. As- suming ha, as Thompson repor ed [1], he variabi y of he wo an igenic impor in an ibody because MCV may have undergone changes in i s surface pro ions during he evolu ionary process in response o he hos . However, i remains o rea i he 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 rea i ha some

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

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 pa ien s wi h he compromised cell-media ed immuni y [1]. Recen ely, we demons ra ed ha he cerebrospinal fluid (CSF) of pa ien s wi h he cryp coccal meningi is is con ains high levels of he neupophil chemoa rac an he divergence of he wo an igenic polypep ides.

The cryp coccal capsular polysaccharide glucuronoxylomannan (GXM) is presen in serum and CSF of pa ien s wi h he cryp coccal meningi is, and GXM is known o rea i he neupophil migra ion [3]. We demons ra ed ha he produc ion of IL-8 by he neupophil correla e wi h he low CSF leukocy e cell coun in pa ien s wi h he cryp coccal meningi is. Therefore, we compared he reac i ve of he GXM in serum and CSF wi h he CSF leukocy e cell coun in 35 Du h human immunodeficiency virus–infec ion pa ien s wi h he cell uer-preven ion diagnosis of cryp coccal meningi is he been heen and 1996. An igen i ers for he pa ien s were measured wi h he commer cial ki s rough used for diagnos is he cryp coccal meningi is.
Figure 1. Inverse correlation between ratio of leukocyte count in cerebrospinal fluid (CSF) and cryptococcal glucuronoxylomannan (GXM) in serum ([GXM]se) over GXM in CSF ([GXM]csf) in 35 patients with cryptococcal meningitis.

(mainly Murex Cryoccus Test; Murex, Ken, UK) and were obtained within 5 days of the CSF leukocyte cell count. Since GXM can a rac neuruphil [4], the GXM concen raion gradien over he blood brain barrier (expressed as the raio of iers in serum vs. CSF) is expec ed to be more cri al o he CSF leukocyte cell count. These d a a sugges ha he in vi ro finding of in efence of GXM wi h neuruphil migra ion may indeed represen a pa hogene ic mechanism in cryp coccal meningi is.

References

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