Cryptococcus gattii

Two types of fungus can cause cryptococcal meningitis (CM). They are called Cryptococcus neoformans (C. neoformans) and Cryptococcus gattii (C.gattii). This disease is rare in healthy people. CM is more common in people who have compromised immune systems, such as people who have AIDS.

In Japan, most cases of cryptococcosis are caused by Cryptococcus neoformans(C. neoformans). Until now, only three cases which the infectious agent was Cryptococcus neoformans var. gattii(Cryptococcus gattii)have been reported. As compared with cryptococcosis caused by C. neoformans, which is often observed in immunocompromised hosts, cryptococcosis caused by C. gattii occurs predominantly in immunocompetent hosts and is resistant to antifungal drugs.

Case reports

A 71-year-old Japanese man with travel history to the Vancouver Island, Canada was diagnosed the pulmonary and central nervous system infections caused by Cryptococcus gattii genotype VGIIa. This is the first imported case of Cryptococcus gattii genotype VGIIa infection from endemic area of North America to Japan. He was recovery with no residual neurological dysfunction by early resection of brain mass and antifungal therapy. Early surgical resection of cerebellar cryptococcoma may shorten the length of induction therapy with antifungal drug [1)].

A refractory cerebral cryptococcoma that was successfully treated by surgical resection of the lesions. A 33-year-old man with no medical history complained of headache, hearing disturbance, and irritability. Pulmonary CT showed a nodular lesion in the left lung. Cerebrospinal fluid examination with Indian ink indicated cryptococcal meningitis, and PCR confirmed infection with C. gattii. C. gattii is usually seen in the tropics and subtropics. Since this patient imported trees and soils from abroad to feed stag beetles, parasite or fungal infection was, as such, suspected. Although he received 2 years of intravenous and intraventricular antifungal treatment, brain cryptococcomas were formed and gradually increased. Because of the refractory clinical course, the patient underwent surgical resection of the cerebral lesions. With continuation of antifungal drugs for 6 months after the surgeries, Cryptococcus could not be cultured from cerebrospinal fluid, and no lesions were seen on MR images. If cerebral cryptococcosis responds poorly to antifungal agents, surgical treatment of the cerebral lesion should be considered. [2)].

1)
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2)
Inada T, Imamura H, Kawamoto M, Sekiya H, Imai Y, Tani S, Adachi H, Ishikawa T, Mineharu Y, Asai K, Ikeda H, Ogura T, Shibata T, Beppu M, Agawa Y, Shimizu K, Sakai N, Kikuchi H. [Cryptococcus Neoformans Var. Gattii meningoencephalitis with cryptococcoma in an immunocompetent patient successfully treated by surgical resection]. No Shinkei Geka. 2014 Feb;42(2):123-7. Japanese. PubMed

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