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Histoplasmosis-Laboratory diagnosis in Vietnam

Thi Thu Ha Hoang[1], Hideaki OHNO[2], Yoshitsugu MIYAZAKI[1 2], Koichi Tanabe[2], Thuy Tram Nguyen[1], Thanh Hai Pham[1], Thai Son Nguyen[3], Minh Hoa Luong[1], Van Tien Nguyen[4], Duc Anh Dang[1]**

[1]National Institute of Hygiene and Epidemiology, Vietnam,
[2]National Institute of Infectious Diseases, Japan,
[3]Bach Mai hospital, Vietnam,
[4]Military 103 hospital, Vietnam

Background: Histoplamosis, a fungal infection caused by *Histoplasma capsulatum* (*H.capsulatum*) - a severe biohazard pathogen. *H.capsulatum* occurs most commonly in America and Africa, but the organism exists in many diverse areas around the world. Cases have also been reported in the following Asian countries: India, Malaysia, Thailand, Singapore, and Japan. In Vietnam, histoplasmosis is still under reported because the researchers are inexperienced for detection of histoplasmosis. In addition, the clinicians do not consider histoplamosis as a possible cause of acute respiratory or influenza – like illness in travelers returning from areas in which histoplasmosis is endemic and this may contribute to under diagnosis. Therefore, a really situation of Histosplamosis should be identified in this country.

Aims: To identify the proportion of Histoplasmosis and detect *H.capsulatum* in human clinical sample in Hanoi, Vietnam.

Materials: Between August 2012 to Janury 2013, 206 serum and 158 bronchial washing samples have been collected from the pulmonary infection patients in Bach Mai and Military 103 hospitals in Hanoi. Serum samples were tested by ELISA – Histoplasma Dx™Select kit (Focus – Mỹ). The bronchial washing samples were extracted DNA and identified *H.capsulatum* by nested PCR using primers specific to gene coding M-antigen (Msp1F/Msp2R, Msp2F/Msp3R).

Results: Serum samples from 206 patients were tested for antibody reactivity by ELISA. Positive ELSIA results were obtained in 27 (13.1%) samples. 9/158 bronchial washing samples were presented M- antigen gene by a nested PCR, and then were confirmed by sequencing.

Conclusion: The proportion of *histoplasmosis* in pulmonary infection patients is very high (13.1%). Also, *H.capsulatum* found in these patients samples by PCR which confirmed that *H.capulatum* has been presented in Vietnam. However, the transmission route of the disease is still a challenge and need to be demonstrated in further studies.

Biography

I am Nguyen Thuy Tram and working as researcher at the Dept of Bacteriology, National Institute of Hygiene and Epidemiology (NIHE). I have been working at NIHE for almost 18 years. My background is very much involving in the field of medical bacteria, parasite particularly, enteric bacteria (Shigella, Salmonella, E.coli, and Helicobacter) and protozoa (Cryptosporidium, Giardia, Cyclospora, Amoeba and Toxoplasma). Recently, I have successfully defended the PhD entitled "Emerging food and waterborne parasites (Cryptosporidium, Giardia, Cyclospora) in Vietnam" at the Faculty of Health and Medical Sciences, University of Copenhagen. The PhD is a part of the joint project funded by DANIDA (Danish International Development Assistance).

ntt3@nihe.org.vn

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