

Comments on "Detection of galactomannan in the bronchoalveolar lavage of high-risk patients with invasive aspergillosis admitted at the intensive care unit" by Khodavaisy et al.

Meidani M^{1*}, Hakamifard A²

¹ Acquired Immunodeficiency Research Center, Isfahan University of Medical Sciences, Isfahan, Iran

² Nosocomial Infection Research Center, Isfahan University of Medical Sciences, Isfahan, Iran

*Corresponding author: Mohsen Meidani, Acquired Immunodeficiency Research Center, Isfahan University of Medical Sciences, Isfahan, Iran.
Email: meidani@med.mui.ac.ir

(Received: 5 May 2015; Revised: 25 August 2015; Accepted: 15 September 2015)

➤ How to cite this paper:

Meidani M, Hakamifard A. Comments on "Detection of galactomannan in the bronchoalveolar lavage of high-risk patients with invasive aspergillosis admitted at the intensive care unit" by Khodavaisy et al. *Curr Med Mycol.* 2015; 1(3):1-2. DOI: [10.18869/acadpub.cmm.1.3.1](https://doi.org/10.18869/acadpub.cmm.1.3.1)

Authors of the present paper reviewed the prospective study conducted by Khodavaisy et al. titled as the "Detection of Galactomannan (GM) in the Bronchoalveolar Lavage (BAL) of High-risk Patients with Invasive Aspergillosis (IA) admitted at the Intensive Care Unit (ICU)". In that study, researchers claimed that there are no available data on the detection of GM in the BAL samples of the patients admitted at ICUs in the Middle East.

In this regard, one study was performed on patients with underlying predisposing conditions for invasive pulmonary aspergillosis (IPA) admitted at the ICU during August 2010-September 2011, and GM was measured using the Platelia Aspergillus EIA testing kit. According to the findings, GM level in the BAL fluid of the studied patients was more sensitive for diagnosis [1].

In this cross-sectional study, we used the GM antigen assay from the BAL fluid for the diagnosis of IPA in patients admitted at the ICU. Our study was conducted on 41 patients suspected of IPA admitted at the ICU of Al-Zahra Hospital in Isfahan, Iran during 2010-2011. Among the study population, 23 patients (56%) were male.

Patients who met the inclusion criteria underwent fiberoptic bronchoscopy performed by a specialist, and BAL fluid samples were obtained from the subjects. Based on the instructions of the manufacturer (BIO-RAD,

France), the sandwich ELISA test was used to determine the GM level in BAL samples at the Infectious Disease Research Center of Isfahan, Iran [2]. According to the results, one male patient aged 64 years was positive for IPA, with the mean GM level of 2.5.

According to our findings, frequency of IPA was 2.43% among the studied patients, while the GM level in the BAL fluid sample of the IPA positive patient (2.50) was significantly higher compared to other subjects (0.03 ± 0.02) [2].

In conclusion, the results of the present study in the patients admitted at the ICU were similar to the findings of Khodavaisy et al. in terms of sensitivity of GM level in the BAL fluid. According to the literature, different factors such as the volume of the collected fluid, sampling methods, and stage of fungal diseases could affect the level of GM in the BAL fluid of high-risk IA patients [3, 4].

References

1. Khodavaisy S, Hedayati MT, Alialy M, Habibi MR, Badali H. Detection of galactomannan in bronchoalveolar lavage of the intensive care unit patients at risk for invasive aspergillosis. *Curr Med Mycol.* 2015; 1(1):12-7.
2. khorvash F, Meidani M, Babaie L, Abbasi S, Ataie B, Yaran M. Galactomannan antigen assay from bronchoalveolar lavage fluid in diagnosis of invasive pulmonary aspergillosis in intensive care unit patients. *Adv Biomed Res.* 2014; 3:68.
3. D'Haese J, Theunissen K, Vermeulen E, Schoemans H, De Vlieger G, Lammertijn L, et al. Detection of galactomannan in bronchoalveolar lavage fluid

samples of patients at risk for invasive pulmonary aspergillosis: analytical and clinical validity. *J Clin Microbiol.* 2012; 50(4):1258–63.

4. Racil Z, Kocmanova I, Toskova M, Boresova L, Weinbergerova B, Lengerova M, et al. Galactomannan

detection in bronchoalveolar lavage fluid for the diagnosis of invasive aspergillosis in patients with hematological diseases-the role of factors affecting assay performance. *Int J Infect Dis.* 2011; 15(12): e874-81.