

Biofilm-Associated Candidal Thrombophlebitis

Shinnosuke Fukushima¹, Koichiro Yamamoto², Yasuhiro Nakano², Hideharu Hagiya³, and Fumio Otsuka⁴

¹Okayama University

²Okayama University Graduate School of Medicine Dentistry and Pharmaceutical Sciences

³Okayama University Hospital

⁴Okayama Daigaku - Shikata Campus

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Abstract

Candidemia is possibly complicated with a biofilm formation, and the mortality rate of biofilm-associated candidemia is reported very high. Herein, we described candida biofilm-related thrombophlebitis, which was successfully treated with micafungin. This case suggested that biofilm targeted therapy may be warranted in the presence of thrombus formation.

Case Image

Biofilm-Associated Candidal Thrombophlebitis

Shinnosuke Fukushima¹, Koichiro Yamamoto¹, Yasuhiro Nakano¹, Hideharu Hagiya¹#, Fumio Otsuka¹

¹Department of General Medicine, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, 2-5-1 Shikata-cho, Kitaku, Okayama 700-8558, Japan.

#Corresponding author

Hideharu Hagiya. M.D., Ph.D.

Department of General Medicine, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, 2-5-1 Shikata-cho, Kitaku, Okayama 700-8558, Japan. Phone number: +81-86-234-7342, Fax number: +81-86-234-7345

E-mail address: hagiya@okayama-u.ac.jp

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Conflicts of interest

No authors have any competing interests in this case.

Informed Consent

Written informed consent was obtained from the patient to publish this case report.

Case

A 45-year-old Japanese woman receiving parenteral nutrition via a peripherally inserted central catheter (PICC) was hospitalized for hypopharyngeal cancer. Blood culture detected *Candida albicans* and plain computed tomography (CT) revealed gas production surrounding the catheter in the brachiocephalic vein (**Figure 1a**). We extracted the PICC and administered fosfluconazole, but candidemia persisted for 2 weeks. A follow-up contrast-enhanced CT showed the disappearance of gas while a blood clot remained (**Figure 1b**). Considering candida biofilm-related thrombophlebitis, we additionally administered micafungin and the recurrent candidemia promptly withdrew with a good clinical course thereafter.

Biofilm-associated candidemia is rare but possibly results in a high mortality rate estimated at around 70% [1]. *Candida* biofilm provides resistance to azole-class antifungals, wherein treatment with echinocandins or amphotericin B is reportedly promising [2]. Clinical course of the present case suggested the effectiveness of micafungin treatment in candidal thrombophlebitis, with which biofilm formation was associated. In case candidemia persisted with thrombus formation, a candida biofilm targeted therapy may be required.

References

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Figure legend

Figure 1. Computed tomography revealing candida thrombophlebitis in the brachiocephalic vein

Gas production surrounding a peripherally inserted central catheter

Residual thrombus after catheter removal

Figure 1. Computed tomography revealing candida thrombophlebitis in the brachiocephalic vein

