



Case Report

Long-term echocardiographic evaluation of valvular lesions in a patient with nonbacterial thrombotic endocarditis associated with advanced uterine cancer



Shinobu Yokoyama (AS)^{a,1}, Hiroyuki Iwano (MD, PhD, FJCC)^{b,1}, Satoshi Yamada (MD, PhD, FJCC)^{b,*}, Mahito Takeda (MD)^c, Sanae Kaga (BS)^d, Masahiro Nakabachi (MS)^a, Hisao Nishino (AS)^a, Ayako Ichikawa (BS)^a, Ayumu Abe (PhD)^e, Kazunori Okada (PhD)^c, Daisuke Murai (MD)^b, Taichi Hayashi (MD)^b, Mutsumi Nishida (PhD)^a, Hitoshi Shibuya^a, Kaoru Kahata (MD, PhD)^a, Chikara Shimizu (MD, PhD)^a, Taisei Mikami (MD, PhD, FJCC)^c, Hiroyuki Tsutsui (MD, PhD, FJCC)^b

^a Division of Laboratory and Transfusion Medicine, Hokkaido University Hospital, Sapporo, Japan

^b Department of Cardiovascular Medicine, Hokkaido University Graduate School of Medicine, Sapporo, Japan

^c Department of Obstetrics and Gynecology, Hokkaido University Graduate School of Medicine, Sapporo, Japan

^d Faculty of Health Sciences, Hokkaido University, Sapporo, Japan

^e Diagnostic Center for Sonography, Department of Support for Medical Practice, Hokkaido University Hospital, Sapporo, Japan

ARTICLE INFO

Article history:

Received 8 February 2016

Received in revised form 6 April 2016

Accepted 27 April 2016

Keywords:

Nonbacterial thrombotic endocarditis

Anticoagulation therapy

Echocardiography

ABSTRACT

Nonbacterial thrombotic endocarditis (NBTE) is characterized by the deposition of thrombi on previously undamaged heart valves in the absence of bacteremia and predominantly affects patients with hypercoagulable state. Although the diagnosis is usually based on transthoracic echocardiography, little is known about the serial changes of the vegetation in response to treatment. We experienced a 42-year-old woman with advanced uterine cancer and asymptomatic cerebral embolization. Plasma D-dimer level was markedly elevated and echocardiography showed highly mobile masses attached to the anterior and posterior mitral leaflets with moderate regurgitation. Based on these findings, she was diagnosed as having NBTE associated with uterine cancer and intravenous administration of heparin and chemotherapy were performed. Follow-up echocardiography revealed the disappearance of the vegetation and reduction of mitral regurgitation. Uterine cancer was successfully treated by surgery and recurrence of the valvular lesion did not occur.

<Learning objective: Echocardiographic follow-up of valvular lesions could be a useful guide of the response to the treatment in patients with nonbacterial thrombotic endocarditis. Accordingly, anticoagulation therapy with careful follow-up echocardiography before the removal of the original cancer could be a reasonable approach in these patients.>

© 2016 Japanese College of Cardiology. Published by Elsevier Ltd. All rights reserved.

Introduction

Nonbacterial thrombotic endocarditis (NBTE) is characterized by the deposition of thrombi on previously undamaged heart

valves in the absence of a bacterial infection in the blood [1] and predominantly affects patients such as those with hypercoagulable states such as co-existent malignancy, autoimmune disorders, and disseminated intravascular coagulation [2]. The management of NBTE has not been established whereas anticoagulation therapy with heparin usually reduces the size of vegetation [3].

Although the diagnosis is usually based on the transthoracic echocardiographic findings, little is known about the serial changes of the vegetation in response to the treatment. We herein report a case with advanced uterine cancer complicated by NBTE

* Corresponding author at: Department of Cardiovascular Medicine, Hokkaido University Graduate School of Medicine, Kita-15, Nishi-7, Kita-ku, Sapporo 060-8638, Japan. Tel.: +81 11 706 6973; fax: +81 11 706 7621.

E-mail address: syamada@med.hokudai.ac.jp (S. Yamada).

¹ These authors contributed equally to this work.

and the disappearance of vegetation by serial follow-up echocardiography during the course of successful treatment.

Case report

A 42-year-old woman who had advanced uterine cancer and multiple cerebral infarctions by brain magnetic resonance imaging (MRI) was referred to the cardiology section for the evaluation of the embolic source. She had neither neurological nor cardiorespiratory symptoms. She did not have history of fever. On physical examination, jugular vein distension and cardiac murmur were not observed. Laboratory data showed that white blood cell count was slightly increased to $10,200/\mu\text{L}$, platelets decreased to $10.5 \times 10^4/\mu\text{L}$, d-dimer concentration was markedly elevated to $26.0 \mu\text{g/mL}$, and C-reactive protein level was normal. Carbohydrate antigen (CA) 19-9 and CA125 levels were elevated to 474.2 U/mL (normal range: $0.0\text{--}37.0 \text{ U/mL}$) and 258.9 U/mL (normal range: $0.0\text{--}35.0 \text{ U/mL}$), respectively. Serological tests for immunity such as rheumatoid factor, antinuclear antibody, and anticardiolipin antibody were negative. In addition, we did not observe any decrease in protein C activity (114%, normal range: 67–127%) and protein S antigen (70%, normal

range: 60–150%). Abdominal MRI demonstrated uterine endometrial tumor with myometrial invasion (Fig. 1A and B), which was diagnosed as well differentiated endometrioid adenocarcinoma by endometrial biopsy. Brain MRI showed scattered areas of high signal intensity on bilateral white matter and a high intensity area at right parietal cortex, suggesting cerebral embolism (Fig. 1C and D). Transthoracic echocardiography revealed highly mobile masses attached to the anterior and posterior mitral leaflets with moderate mitral regurgitation (MR) (Figs. 2, 3A, Videos 1, 2, and 3A). There was no evidence of perforation of the leaflets or damage of the mitral annulus. Because the mitral leaflets did not show any prolapse or tethering and the regurgitation was seen from the site where the vegetations were attached, the MR was considered to be due to insufficient coaptation of the leaflets brought by the vegetations.

Since the patient did not show any evidence of systemic inflammation as well as compromised status, the probability of infective endocarditis was considered to be low. In addition, Libman–Sacks endocarditis was excluded by the serological tests for immunity. For these reasons, together with the increased fibrinolytic activity, she was suspected to have NBTE associated

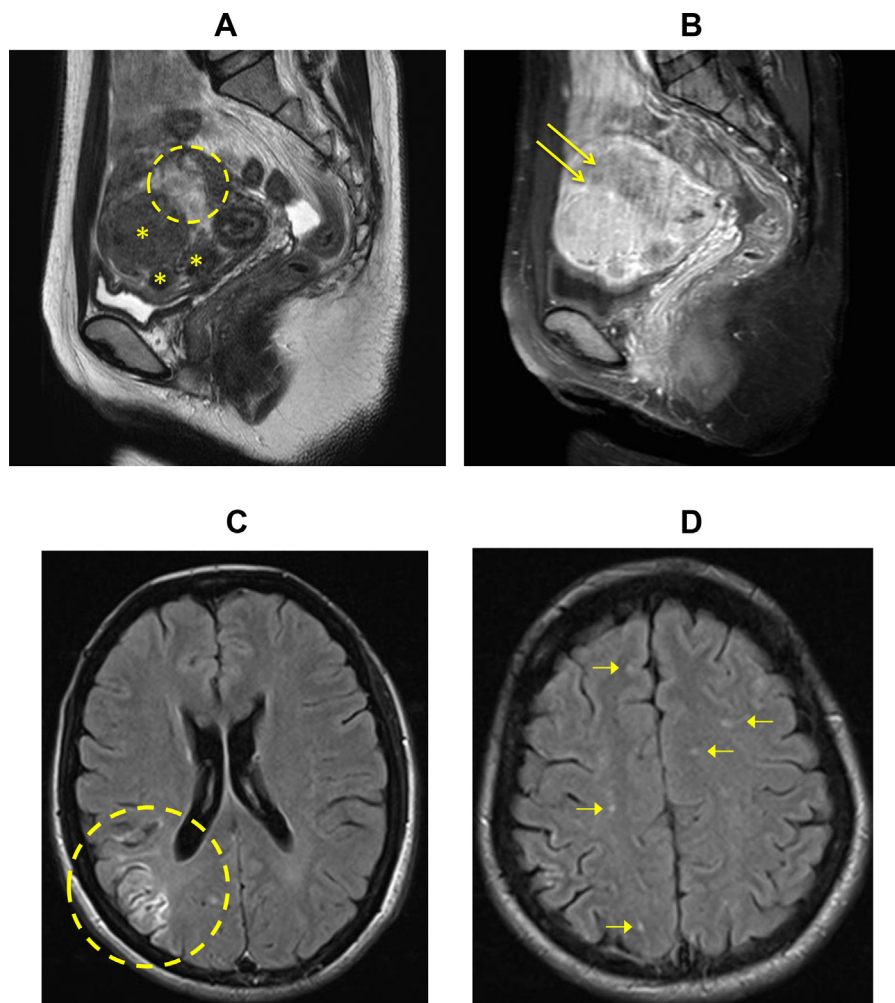


Fig. 1.

T2-weighted (A) and gadolinium-enhanced (B) MRI showing a large tumor in the uterine endometrium (dashed circle) infiltrating into the myometrium (dual arrow) and several myomas in the uterus (asterisk). Fluid attenuated inversion recovery MRI showing high intensity area at right parietal cortex (C, circle) as well as small, scattered high intensity areas at bilateral white matter (D, arrows), indicating prior multiple cerebral infarctions. MRI, magnetic resonance imaging.

Download English Version:

<https://daneshyari.com/en/article/5614841>

Download Persian Version:

<https://daneshyari.com/article/5614841>

[Daneshyari.com](https://daneshyari.com)