Right Atrial Tumor and Sick Sinus Syndrome

Key words: right atrial tumor, sick sinus syndrome (SSS), fluorine-18-fluorodeoxyglucose (FDG)–positron emission tomography (PET)

Figure 1. Electrocardiographic monitoring showing sinus arrest of over 8 sec following atrial fibrillation.

Figure 2. FDG-PET images (A: anterior view, B: lateral view) showing intense uptake in the right atrium, mediastinal lymph nodes, and bilateral adrenal glands.
Right atrial tumors are rare although they sometimes cause sick sinus syndrome (SSS), and gallium-67 scintigraphy is useful for detecting these tumors. Fluorine-18-fluorodeoxyglucose (FDG)-positron emission tomography (PET) was recently found to be a more useful method of detecting tumorous lesions.

An 85-year-old woman was admitted due to palpitation and dizziness. Electrocardiographic monitoring revealed sinus arrest of over 8 sec following atrial fibrillation (Fig. 1). She was diagnosed as having SSS, and a dual chamber pacemaker was implanted. After the surgery, she had a persistent low grade fever and elevated serum C-reactive protein and lactate dehydrogenase levels despite the absence of signs of pacemaker infection. FDG-PET revealed intense uptake in the right atrium, mediastinal lymph nodes and bilateral adrenal glands (Fig. 2). She was diagnosed as having malignant lymphoma based on the high serum level of soluble interleukin-2 receptor, and died two months after the pacemaker implantation. Right atrial tumors should be considered as an etiology of SSS.