A 37-year-old man of marfanoid body habitus presented with dyspnea following momentary chest pain. A chest X-ray showed pulmonary congestion and transthoracic echocardiography showed aortic valve regurgitation without ascending aortic dissection. Computed tomography (CT) demonstrated aortic dissection from the aortic arch to the bilateral common iliac arteries, but there was no evidence of dissection in the ascending aorta (Fig. 1A, B). A transesophageal echocardiography was performed and revealed a circumferential intimal flap with valve-like motion in the dilated aortic root (Fig. 1 C, D) and severe aortic valve regurgitation. Urgently, the Bentall procedure was performed and about 3/4 circumferential dissection above the sinus of Valsalva was confirmed.

CT is selected most frequently as the initial test of acute aortic dissection, but there are some variants of aortic dissection which are not visualized on CT scans. Transesophageal echocardiography is useful for the diagnosis and it is reported to be
superior to CT in detecting dissection, especially in the ascending aorta (1). Indeed, a few reports have demonstrated cases of ascending aortic dissection which were diagnosed only by transesophageal echocardiography and were negative by CT (2, 3). In the present case, the moving flap was not demonstrated on the CT scan while the transesophageal echocardiography showed it clearly, because the temporal resolution of CT was lower than that of transesophageal echocardiography. Therefore, aortic dissection with a localized and moving intimal flap should be included in the list of variants which are not visualized on CT scan, and we should select transesophageal echocardiography as the first-level instrumental modality in the diagnosis of aortic dissection.

References