Celiac artery aneurysms are rare and frequently detected incidentally. It is usually with associated aneurysms. Herein we present accidentally detected, asymptomatic celiac aneurysm in a patient with acute myocardial infarction. Multi-slice tomography and invasive angiography images are provided along with brief discussion on clinical presentation, diagnostic tools and treatment options. Key words: visceral aneurysm, coronary artery disease, coronary angiography.

CASE REPORT

Celiac Artery Aneurysm

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1. INTRODUCTION

A celiac artery aneurysm is a rare form of splanchnic aneurysm (1). It is usually asymptomatic and is detected incidentally during imaging. We present a case of incidentally detected celiac aneurysm in a patient who presented with acute myocardial infarction.

2. CASE REPORT

A sixty-one-year-old man presented with chest pain. He had suffered an acute myocardial infarction five years earlier and was diagnosed with an abdominal aneurysm two years later. The results from a physical examination were normal. Electrocardiography showed an ST depression in V1-V3. Coronary angiography revealed total occlusion of an anomalous circumflex artery (CX), which was small in size, arising from the right coronary sinus; mild to moderate atherosclerotic changes in the left anterior descending and right coronary arteries; and aneurysms in the ascending and abdominal aortas (Figure 1). No intervention was planned because of the small size of the CX. The largest transverse diameters of the aneurysms in the ascending and abdominal aortas were calculated to be 5 cm by cine-angiography. Multi-slice tomography (MSCT) showed, in addition to the aneurysms in the ascending and abdominal aortas, a saccular aneurysm in the celiac artery the maximum transverse diameters measuring 3 x 2 cm (Figure 2). The patient was discharged on the 6th day of hospitalization in good condition.

3. DISCUSSION

Celiac aneurysms account for less than 4% of all splanchnic aneurysms (1). In 20% of cases, they occur with associated aneurysms, and in 38% of cases, they occur together with other splanchnic aneurysms (2). Celiac artery aneurysms mostly occur in patients who are sixty to seventy years old. The most common etiological factors include infection, atherosclerosis, tuberculosis or syphilis, trauma, fibromuscular dysplasia and polyarteritis nodosa (3). In our case, the most probable cause of both the celiac aneurysm and the ascending and abdominal aorta aneurysms was atherosclerosis.

Patients are usually asymptomatic, although vague abdominal pain is the most commonly reported symptom. In cases of rupture, patients might present with intra-peritoneal hemorrhage, hematochezia, hemoptyis, hemateme-
sis or hemothorax (3, 4). In our case, the patient had no symptoms before the diagnosis.

The results from catheter angiography have traditionally been used to determine diagnosis, but ultrasonography, MSCT, and magnetic resonance angiography are also useful. In our patient, although abdominal aorta aneurysm had been diagnosed on the basis of ultrasonographic results three years earlier, the celiac aneurysm was either overlooked or not present at that time. During the coronary angiography, aortography was performed, which revealed aneurysms in the ascending and abdominal aortas. The largest dimension of the abdominal aneurysm was 5.0 cm. We could not differentiate the celiac aneurysm. Instead, we thought there were two sequential aneurysms in the abdominal aorta because of the superimposition of the celiac axis on the aorta. However, MSCT showed that the celiac aneurysm was just proximal to the abdominal aneurysm.

Conservative, endovascular or surgical treatment options have been considered (5, 6, 7). In 25–20% of patients, ruptures develop, resulting in a mortality rate of 80% (8). This finding suggests that all symptomatic aneurysms, including those that are increasing in size or are larger than 3 cm should be considered for surgical or endovascular treatment (3). Surgical treatment has a 5% mortality rate in stable patients but can reach 40% if rupture occurs (5, 9). In our case, the patient had never had any symptoms, but the largest diameter of the aneurysm, which included some calcification, was 3.0 cm. We chose medical therapy for initial management because the patient had recently suffered a myocardial infarction, which meant that surgery would have had an increased risk of mortality.

In conclusion, celiac aneurysms commonly occur with other aneurysms and can be easily overlooked. The mortality rate is high if rupture occurs. Invasive angiography has some limitations in discriminating the celiac artery from the aorta, but MSCT permits visualization of the aorta and its branches.

REFERENCES