Aneurysm of the ascending aorta is a rare complication of coronary artery bypass grafting (CABG) surgery. Aneurysm is commonly seen in the aortic cannulation site and suture line of bypass grafting. A 67-year-old male patient who presented with chest pain lasting for 30 minutes admitted to emergency unit. His blood pressure was 130/70 mmHg. Electrocardiography revealed 2 mm and 1 mm ST-segment depression in the lead V3-V6 and aVL, respectively. The patient had undergone CABG six years ago and his medical history included hypertension, diabetes mellitus, and smoking, which all of them were known risk factors. Physical examination indicated no significant finding, whereas laboratory tests showed a plasma troponin T level of 3.03 ng/mL. The patient who was diagnosed with non ST-segment elevation myocardial infarction was sent to catheter lab for early invasive intervention. Coronary angiography demonstrated total occlusion of the proximal left anterior descending (LAD) artery and circumflex (Cx) artery, and middle right coronary artery. However, left main coronary artery was normal. Routine bypass grafting showed that LIMA and aorta-right coronary saphenous grafts were open, whereas a 90% stenosis was observed in the anastomosis region of aorta-circumflex saphenous graft. In addition, saccular aortic aneurysm (4.4x3.5 cm) in the anastomosis region of the saphenous grafts was seen during aortography (Figure A). Medical follow-up was scheduled to assess aorta-circumflex saphenous graft lesion, while cardiac magnetic resonance imaging was performed to view saccular aneurysm of the ascending aorta on day 5 after hospitalization (Figures B, C). Following cardiac magnetic resonance imaging, the patient was evaluated by cardiovascular surgeons and he was recommended to undergo surgery for saccular aneurysm of the ascending aorta. However, when the patient did not accept surgery, he was discharged on day 10 with medical treatment including aspirin (100 mg/day), clopidogrel (75 mg/day), metoprolol (100 mg/day) and ramipril (5 mg/day).