Massive right atrial tamponade early after coronary artery bypass grafting

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ABSTRACT

If unrecognized, tamponade after coronary artery bypass grafting can be fatal. We describe a 63-year-old man who developed unexplained hypotension and tachycardia and was found to have severe compression of the right atrial cavity by a large hematoma in the pericardial sac.

KEYWORDS Anticoagulation; cardiac tamponade; echocardiography; pericardial effusion

Pericardial effusion is a common complication after cardiac surgery and usually does not cause clinical compromise.¹ Studies have shown that pericardial effusion can reach maximum size by postoperative day 10.² Excessive accumulation of fluids in the pericardial sac disturbs venous return and normal hemodynamics, ultimately causing cardiac tamponade and cardiac arrest.^{3,4}

CASE DESCRIPTION

A 63-year-old man who underwent coronary artery bypass grafting developed atrial fibrillation and was started on amiodarone and enoxaparin. Because he was hemodynamically stable without recurrence of any arrhythmia, the anticoagulation was stopped and he was transferred to a rehabilitation facility. While there, 15 days after surgery, he was suddenly found unresponsive and pulseless, and resuscitation was performed with return of spontaneous circulation. A transthoracic echocardiogram was inconclusive. A transesophageal echocardiogram revealed complete right atrial collapse from a massive pericardial hematoma (*Figure 1*). The patient was immediately taken to the operating room, and exploration revealed serosanguinous pericardial fluid and a massive hematoma adherent to the right atrial wall. The hematoma was excised.

DISCUSSION

Postoperative atrial fibrillation increases the risk of cerebrovascular accidents, with the optimum management remaining unclear from an anticoagulation standpoint.⁵ Studies have suggested that initiation of anticoagulation is usually reasonable.⁶ In patients with advanced age, a previous history of bleeding, and uncontrolled hypertension, the risk might outweigh the benefit.⁷ Malouf et al stated that the incidence of pericardial effusion in patients under full anticoagulation was higher than that without anticoagulation.⁸ Clinicians must decide whether the benefit of anticoagulation outweighs the bleeding risk.

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Figure 1. Transesophageal echocardiogram showing complete right atrial collapse from a massive pericardial hematoma.

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