

# A bulldog clamp that was forgotten during a coronary artery bypass operation 8 years ago

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## Abstract

Prevention of retained foreign bodies in the pericardial cavity is critical for patient safety. We report a patient with a bulldog clamp that was forgotten during a coronary artery bypass operation 8 years ago, which was detected by chance and removed.

**Keywords:** Coronary artery bypass surgery • Pericardium • Foreign body

## INTRODUCTION

Although foreign objects are infrequently left in the pericardial space after cardiac surgery, it is a problem sometimes encountered. Gauze pads, catheter pieces, surgical instruments and their parts are among the most frequently encountered objects. We report a patient with a bulldog clamp that was forgotten during a coronary artery bypass graft operation 8 years ago, which was detected by chance and removed.

## CASE REPORT

A 55-year-old woman who had undergone a coronary bypass (left internal mammary artery-left anterior descending artery, Aort-right coronary artery) surgery 8 years ago was referred to the cardiology polyclinic of our hospital because of chest pain. Coronary ischaemia was detected by the preliminary tests performed; therefore, the patient underwent coronary angiography. At angiography, it was observed that both grafts were occluded, and a bulldog camp was detected that had been left in the pericardial space during the operation (Fig. 1).

The patient was reoperated to redo the coronary artery bypass graft. A median sternotomy was performed. All pericardial tissue was dissected carefully. To expose the bulldog clamp, the heart was vertically displaced by fixing the suction cup of a Starfish Heart Positioner (Medtronic, Minneapolis, MN, USA) on the apex. On the posterior surface of the heart, immediately above the coronary sinus, the bulldog clamp was found, completely covered by fibrin and partly embedded in the ventricle, but not protruding into the cardiac cavity. The bulldog clamp was dissected with the aid of scissors and electrocautery (Fig. 2).

Aort-left anterior descending artery, Aort-right coronary artery dual coronary bypass was applied to the beating heart.

## DISCUSSION

Although foreign objects are not often left in the pericardial space after open heart surgery, it is a problem sometimes encountered. The rate of forgotten foreign material is one in 7000 [1]. In the present case, the bulldog clamp did not result in any complication; however, foreign objects may sometimes result in haemodynamic compromise, a foreign body reaction or risk of infection.



Figure 1: Angiographic view of forgotten bulldog clamp.



**Figure 2:** Intraoperative view of forgotten bulldog clamp.

In asymptomatic patients, the indication for surgery depends on the nature and location of the foreign body. Patients with foreign bodies completely embedded in the myocardium or in the pericardial space usually remained symptom free for a time [1]. Surgical options depend on the location of the foreign body and the need for cardiopulmonary bypass [2].

Forgotten surgical material can not only cause serious and fatal injuries, but can also lead to increased costs and a bad

reputation for clinicians and treating institutions. Both the surgeon and the assisting personnel carry a great responsibility in this regard. It is very important to carry out an accurate count of gauze pads and to use surgical materials carefully. Foreign material should definitely be removed if it is detected in the early postoperative period. We suggest that a bulldog clamp, which can easily be detected by telecardiography during the immediate postoperative period, should be removed by transferring the patient back to the operating theatre before the patient recovers from general anaesthesia.

In conclusion, symptomatic foreign bodies manifesting with infection, arrhythmia, erosion or neurological complication should be removed irrespective of their location [3]. Asymptomatic foreign bodies without associated risks or diagnosed late after surgery may be treated conservatively.

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