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The Cheapest Coronary Stabilizer in The History of Cardiac Surgery

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Abstract

Off Pump Coronary Artery Bypass Grafting (OPCABG) and on-pump coronary artery bypass grafting (ONCABG) are two different techniques with advantages and disadvantages in certain subgroups of patients. We usually perform isolated OPCABG on Left Anterior Descending (LAD) coronary artery using Left Internal Mammary Artery (LIMA), and we developed the cheapest coronary stabilizer never made in the history of cardiac surgery. We would to present it to the Scientific Community proposing its use both in poor Countries, in Countries with emerging economies, and in industrialized Nations, which want to operate savings, especially in times of global economic recession.

Keywords: CABG; Coronary Artery Bypass Grafts; Surgery/Incision/Exposure/Techniques; Surgical Equipment (Instruments, Sutures, Etc.)

Introduction

Off Pump Coronary Artery Bypass Grafting (OPCABG) and On-Pump Coronary Artery Bypass Grafting (ONCABG) are two different surgical approaches for the treatment of coronary artery disease. They have advantages and disadvantages in certain subgroups of patients. Risks and benefits of both approaches need to be consider in order to choose the strategy, which maximizes the long-term benefit and minimizes short-term risk [1]. In specific cluster of patients and related to surgical skills and experience, OPCABG reduces length of hospital stay, operative morbidity, and operative mortality [2]. Because we usually perform isolated OPCABG on Left Anterior Descending (LAD) coronary arteries with Left Internal Mammary Artery (LIMA), we developed the cheapest coronary stabilizer never made in the history of cardiac surgery aiming to spear found without reducing the quality of our surgical results.

Text

We have designed a stabilizer for the Left Anterior Descendent (LAD) coronary artery useful for OPCABG. It is realized with two ordinary steel wires, normally used in sternal closure, cut in 15 cm length. On each of which is inserted a segment of plastic pipe tourniquet, cut of the length of 5 cm (Figure 1).

Figure 1: The cheapest coronary stabilizer made with twisted steel wires and plastic pipe tourniquet.

The two steel wires are twisted bringing up the four extremes of plastic pipe, while their ends are left linear so that it can be anchored within the drapes of tissue closest to the sternal retractor to which are made integral with four Kocher (Figure 2).

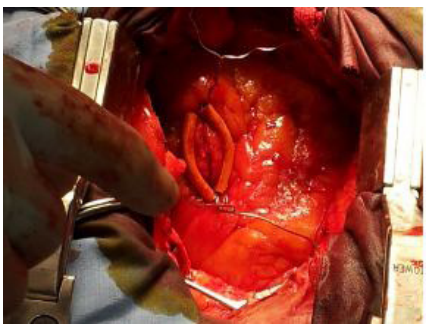

Figure 2: Application of the device during an OPCABG on the Left Anterior Descendent (LAD) coronary artery by Left Internal Mammary Artery (LIMA).

Our device shows to be effective at par of the current common coronary stabilizers available on the market. The execution time of the anastomosis on the anterior descending coronary artery is only operator dependent and it is not affected by the use of our device. Upon its removal, this cheapest coronary stabilizer does not leave areas of injury or hypo perfusion on the heart (Figure 3).

Figure 3: Result of the anastomosis after the removal of the cheapest coronary stabilizer.

It is easy to build and apply by the surgeon, offering a very low cost in our Hospital. It may be proposed for use both in Countries with emerging economies, in poor Countries, and in industrialized Nations, which want to operate savings, especially in times of global economic recession.

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