



Mitral Valve Surgery and Surgical Ablation for Atrial Fibrillation

Arnaldo Ippoliti*

Department of Vascular Surgery, Royal Prince Alfred Hospital, Camperdown, Australia

DESCRIPTION

The frequent arrhythmia known as Atrial Fibrillation (AF) is connected to mitral valve dysfunction. AF is usually seen in about half of individuals after Mitral Valve Surgery (MVS), and it is linked to a poor prognosis. Most AF patients have long-lasting persistent AF because pressure overload causes long-term atrial strain. LSPAF ablation has proven to be a difficult challenge for many electro physiologists. Therefore, when mitral surgery is being done concurrently to restore sinus rhythm, surgical ablation for LSPAF may be the best option. The Cox-Maze III, often known as the "Cut-and-Sew" Maze (CSM), is without a doubt the best method for treating AF linked to valvular illness. This study found that at one year following surgery, the frequency of sinus rhythm was more than 90%. The CSM can be used widely, but its time-consuming and technically difficult nature restricts this. New energy sources led to modifications of the atrial lesion sets; bipolar radiofrequency and cryo ablation replaced a number of the maze III cut-and-sew lesions, and this facilitated process was known as the Cox-Maze IV. In the surgical management of AF, the Cox-Maze IV procedure is frequently used. Furthermore, in patients with paroxysmal AF, the impact of Cox-Maze IV is comparable to that of the CSM. The Cox-Maze IV's effectiveness in LSPAF patients, however, is significantly lower than the CSM's. Evidence also showed that the left atrium is where recurrence of AF in individuals undergoing initial ablation for persistent AF primarily occurs. As a result, left atrial ablation is necessary for the cessation of AF.

In this study a modified maze surgical ablation procedure for the treatment of LSPAF in patients undergoing MVS in order to increase the effectiveness of Cox-Maze IV and streamline the

CSM procedure. In a nutshell, the classic "cut-and-sew" method is still utilized to treat left atrial lesions, and cryo ablation combined with a Cavo Tricuspid Isthmus (CTI) line is used to treat right atrial lesions. The goals of this change were to streamline the process, shorten the operating time, and maintain the procedure's efficacy and safety for LSPAF patients receiving MVS. When combined with mitral valve surgery, the Cut-and-Sew Maze (CSM) method shows good success in removing long-standing persistent Atrial Fibrillation (AF). Cardiopulmonary bypass is complicated and takes a long time; hence CSM has not been used much. This study's goal was to evaluate a modified maze process that keeps the "cut-and-sew" technique in the left atrium while using cryo ablation and the Cavo Tricuspid Isthmus in the right atrium (CTI). For LSPAF patients who received MVS, we presented a modified surgical ablation technique in this study. The modified maze was equally effective at maintaining a healthy sinus rhythm and allowing for the cessation of antiarrhythmic medication as the "gold standard," CSM. The surgical procedure was accelerated by the modified maze technique, and the timeframes required for cardiopulmonary bypass and cross-clamp were decreased. Less is known about the underlying causes of AF, which has led to a wide range of current surgical and ablation treatments for LSPAF. In 88.8%-94% of cases, Pulmonary Veins (PVs) may contain one or more foci that act as AF trigger locations. Therefore, Pulmonary Vein Isolation (PVI) is the cornerstone of AF ablation. In conclusion, the early outcomes of a modified maze procedure for the management of LSPAF in conjunction with MVS. The traditional CSM was simplified by this modified maze method, which is equally effective. Additionally, this modified maze approach cut down on the time needed for cardiopulmonary bypass and aortic cross-clamp.

Correspondence to: Arnaldo Ippoliti, Department of Vascular Surgery, Royal Prince Alfred Hospital, Camperdown, Australia, E-mail: Ippoliti@gmail.com

Received: 01-Jul-2022, Manuscript No. JVMS-22-17594; **Editor assigned:** 04-Jul-2022, Pre QC No. JVMS-22-17594 (PQ); **Reviewed:** 25-Jul-2022, QC No. JVMS-22-17594; **Revised:** 01-Aug-2022, Manuscript No. JVMS-22-17594 (R); **Published:** 08-Aug-2022, DOI: 10.35248/2329-6925.22.10.468.

Citation: Ippoliti A (2022) Mitral Valve Surgery and Surgical Ablation for Atrial Fibrillation. J Vasc Surg. 10:468.

Copyright: © 2022 Ippoliti A. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.