Interventional Cardiology Journal
ISSN: 2471-8157

Open access Commentary

Cardiac Catheterization: A Life-saving Procedure Explained

Sofia Martinez*

Department of Cardiology, Health Sciences University, United Kingdom

DESCRIPTION

Cardiac catheterization is a critical procedure used by cardiologists to diagnose, evaluate, and treat various heart conditions. It allows healthcare providers to obtain a comprehensive view of the heart's function and structure, guiding them in making informed decisions about patient care. Over the decades, cardiac catheterization has evolved significantly, becoming a vital tool in modern cardiology. This article provides a thorough understanding of cardiac catheterization, its indications, techniques, benefits, risks, and role in modern cardiovascular medicine. Cardiac catheterization, often referred to as a "heart cath," is a minimally invasive procedure used to examine how the heart is functioning. During the procedure, a thin, flexible tube known as a catheter is inserted into a blood vessel, usually through the groin or wrist, and advanced to the heart. Once in place, the catheter can measure pressures inside the heart, take blood samples, visualize blood vessels and chambers, and even deliver treatments such as stents or balloon angioplasty. The procedure can be diagnostic, therapeutic, or a combination of both. As a diagnostic tool, it helps to identify problems such as blockages in coronary arteries, heart valve issues, or congenital heart defects. As a therapeutic intervention, it can be used to treat Coronary Artery Disease (CAD) or correct arrhythmias through various techniques. Cardiac catheterization is typically performed when a patient shows signs or symptoms of a heart condition that requires further investigation or treatment. One of the most common reasons for a cardiac catheterization is to evaluate the presence of blockages or narrowing in the coronary arteries, which supply oxygen rich blood to the heart muscle. The procedure can measure the pressures in the heart's chambers, assess heart valve function, and check the overall pumping ability of the heart. Cardiac catheterization can be used to diagnose congenital heart defects or other structural abnormalities in the heart, such as holes in the heart (atrial septal defects or ventricular septal defects). It can help identify issues with heart valves, such as stenosis (narrowing) or regurgitation (leakage), providing important information on whether surgery or other treatments are necessary. Cardiac catheterization is often used as a platform for interventional procedures like coronary angioplasty (stent placement) or balloon valvuloplasty to open narrowed arteries or heart valves. After a heart attack (myocardial infarction), cardiac catheterization can be used to assess the extent of the damage and determine the best course of treatment. When patients experience heart failure, catheterization helps to understand the causes of the condition, including issues with the heart's pumping function or valve disease. It can also be used to diagnose high blood pressure in the arteries of the lungs, which can contribute to heart failure and other complications. Cardiac catheterization is typically performed in a specialized room known as a catheterization lab, or "cath lab," under the supervision of a cardiologist. The procedure generally lasts between 30 minutes to an hour, depending on the complexity of the case. Before the procedure, patients are typically asked to fast for several hours. They will also undergo a physical examination and may have an IV line placed for administering fluids and medications, including sedatives for relaxation.

ACKNOWLEDGEMENT

None.

CONFLICT OF INTEREST

The author's declared that they have no conflict of interest.

Received:	30-October-2024	**Manuscript No:**	IPIC-24-22044
Editor assigned:	01-November-2024	**PreQC No:**	IPIC-24-22044 (PQ)
Reviewed:	15-November-2024	**QC No:**	IPIC-24-22044
Revised:	20-November-2024	**Manuscript No:**	IPIC-24-22044 (R)
Published:	27-November-2024	**DOI:**	10.36648/2471-8157.10.11.103

Corresponding author Sofia Martinez, Department of Cardiology, Health Sciences University, United Kingdom, E-mail: smartinez@meduni.edu

Citation Martinez S (2024) Cardiac Catheterization: A Life-saving Procedure Explained. Interv Cardiol J. 10:103.