

# Difference Between PTCA and PCI

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## Key Difference - PTCA vs PCI

Percutaneous Transluminal Coronary Angioplasty (PTCA) and Percutaneous Coronary Intervention (PCI) both essentially mean the process of dilating a coronary [artery](#) stenosis using an inflatable balloon and a metallic stent introduced into the arterial circulation via the femoral, radial or the brachial artery. Nowadays it is the most commonly used intervention in the treatment of [ischemic heart diseases](#). It should be stressed that there is **no difference** between PTCA and PCI. They are in fact synonyms.

## What is PTCA?

Percutaneous Transluminal Coronary Angioplasty or PTCA is a procedure used in the treatment of ischemic heart diseases that are due to the blockages in the coronary circulation. It can be defined as the process of dilating a coronary artery stenosis using an inflatable balloon and a metallic [stent](#) introduced into the arterial circulation via the femoral, radial or the brachial artery. There is a better prognosis in the presence of a soft lesion that does not involve any arterial bifurcations.

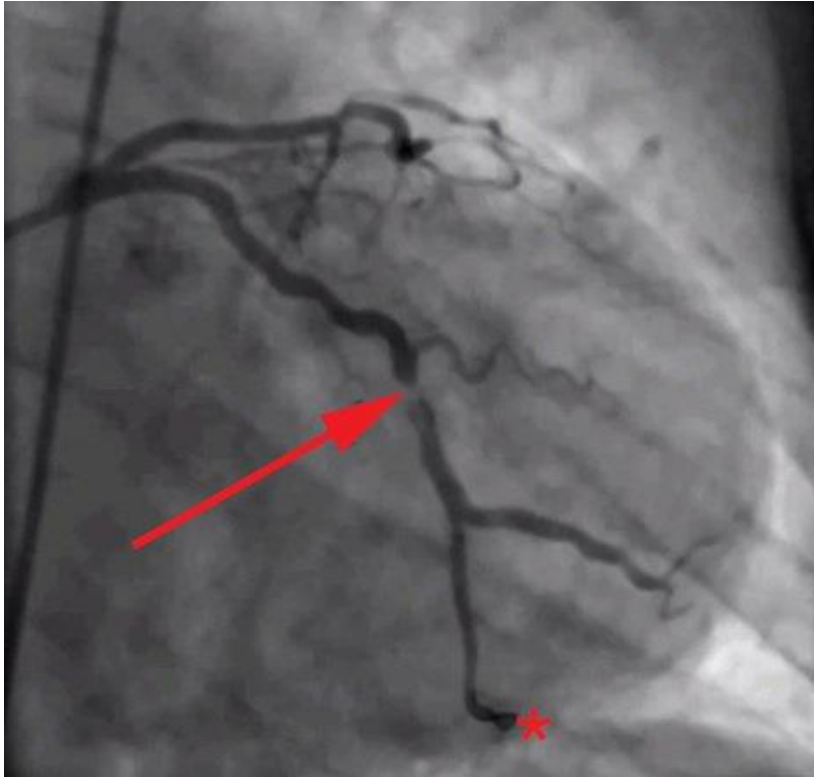
PTCA is not recommended when the site of obstruction is within a calcified, long and tortuous artery which is bifurcating at an adjacent point.

## Complications of PTCA

- Internal [hemorrhages](#)
- [Hematoma](#)
- Dissection and pseudoaneurysms from the arterial puncture site. Risk of this can be minimized by using the radial artery to gain access to the arterial circulation.
- Serious but rare complications are acute [myocardial infarction](#), [stroke](#), and death.

The risk of thrombotic complications is reduced by the prior administration of one or few of the following pharmaceutical agents.

- [Heparin](#)
- Bivalirudin
- Antiplatelet drugs
- [Aspirin](#)
- GP IIb/IIIa antagonists are used in the patients having very high risk acute coronary syndrome or [diabetes](#).



**Figure 01: A Coronary Angiogram showing an Occluded Coronary Artery.**

The recent introduction of the stents coated with a drug capable of preventing the restenosis of the damaged vessel has minimized the necessity of repeated revascularization. These stents are known as the drug-eluting stents. There are different varieties of stents according to the drug they are coated with. Concerns have been raised over the increased possibility of late stent thrombosis. The lack of endothelialization of the stent is believed to be the basis for this increased risk. Therefore, all the patients who have undergone PTCA are advised not to discontinue the dual therapy with aspirin and clopidogrel within 6-12 months of implantation.

## **What is PCI?**

Percutaneous Coronary Intervention is another name given to PTCA. Therefore there is no difference between these two terms.

## **What is the Difference Between PTCA and PCI?**

- There's no difference between PTCA and PCI since Percutaneous Transluminal Coronary Angioplasty, or PTCA is also referred by the name Percutaneous Coronary Intervention or PCI.

## **Summary - PTCA vs PCI**

PTCA or Percutaneous Transluminal Coronary Angioplasty is the process of dilating a coronary artery stenosis using an inflatable balloon and a metallic stent introduced into the arterial circulation via the femoral, radial or the brachial artery. Percutaneous Coronary Intervention is another name given to this procedure. Therefore there is no difference between PTCA and PCI.

**Reference:**

1.Kumar, Parveen J., and Michael L. Clark. Kumar & Clark clinical medicine. Edinburgh: W.B. Saunders, 2009.

**Image Courtesy:**

1.'Coronary angiography of a STEMI patient, showing partial occlusion of left circumflex coronary artery' By Todt T, Maret E, Alfredsson J, Janzon M, Engvall J, Swahn E - Todt T, Maret E, Alfredsson J, Janzon M, Engvall J, Swahn E (2012). [\(CC BY 2.0\)](#) via [Commons Wikimedia](#)

**How to Cite this Article?**

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