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Checking the operation of angiography apparatus, advantages, disadvantages, and the medical uses of it in the past few years in engineering and medicine field

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Abstract

Angiography or arteriography is a medical imaging technique used to visualize the inside, or lumen, of blood vessels and organs of the body, with particular interest in the arteries, veins and the heart chambers. Different types of devices include Coronary Angiography, Cerebral Angiography, Peripheral Angiography, Visceral Angiography, Pulmonary Angiography lymph Angiography, Right heart ventriculography, Left heart ventriculography and Aortography. Avoid eating and drinking 4-8 hours before doing angiography in order to be prepared. After an angiogram, a sudden shock can cause a little pain at the surgery area, but heart attacks and strokes usually don't occur, as they may in bypass surgery. There is always a slight chance of cancer caused by radiation, nevertheless, the benefits of proper diagnosis is better than its risk. Angiography in a short time shows the status of the cardiovascular system and helps the physicians more confidently determine the type of treatment. In this article, we will examine these items.

Key words: Angiographic, Medical imaging, ventriculography, arteriography

1-Introduction

Today, medical imaging devices, including angiography, are very important. Angiography or arteriography is a medical imaging technique used to visualize the inside, or lumen, of blood vessels and organs of the body, with particular interest in the arteries, veins and the heart chambers. The angiographic device consists of different types, components, quality and price. We will look into this article.

2-Overview

Angiography or arteriography is a medical imaging technique used to visualize the inside, or lumen, of blood vessels and organs of the body, with particular interest in the arteries, veins and the heart chambers. This is traditionally done by injecting a radio-opaque contrast agent into the blood vessel and imaging using X-ray based techniques such as fluoroscopy. (G. Timothy and Johnson, M.D, 2011)

The word itself comes from the Greek words ἀγγεῖον angeion, "vessel", and γράφειν graphein, "to write" or "record". The film or image of the blood vessels is called an angiograph, or more commonly an angiogram. Though the word can describe both an arteriogram and a venogram, in everyday usage the terms angiogram and arteriogram are often used synonymously, whereas the term venogram is used more precisely. (G. Timothy and Johnson, M.D, 2011)