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Abstract book

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PULMONARY ANGIOGRAPHY IN MODERN CLINICAL PRACTICE

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An angiogram, also called an arteriogram, is an x-ray image of the blood vessels. It is performed to evaluate various vascular conditions, such as an aneurysm (ballooning of a blood vessel), stenosis (narrowing of a blood vessel), or blockages.

A pulmonary angiogram is an angiogram of the blood vessels of the lungs. A pulmonary angiogram may be used to assess the blood flow to the lungs. One of the primary indications for the procedure is the diagnosis of a pulmonary embolus (clot). It may also be used to deliver medication into the lungs to treat cancer or hemorrhage.

In order to obtain a radiographic (x-ray) image of a blood vessel, an intravenous (IV) access is necessary so that a contrast dye can be injected into the body's circulatory system, which includes the pulmonary (lungs) circulatory system. This contrast dye causes the blood vessels to be visible on x-ray film. This allows the physician to see the size, shape, and many branches of the pulmonary vessels, in particular, the pulmonary artery that circulates blood to the lungs.

Fluoroscopy (the study of moving body structures) is often used during a pulmonary angiogram. A continuous x-ray beam is passed through the body part being examined, and is transmitted to a TV-like monitor so that the body part and its motion can be seen in detail.

An additional technology that may be used with an angiogram is called digital subtraction angiography (DSA). Instead of using x-rays, DSA is based on computer imaging. DSA still requires a contrast dye to be injected into the pulmonary circulation. However, with DSA, a computer image is made prior to the injection of the dye. A computer digitally subtracts (or removes) everything from the image except that which is injected with the contrast dye, so that the computer image remaining is one of the pulmonary blood vessels only.

A pulmonary angiogram may be performed to visualize the pulmonary vascular system, to evaluate for abnormalities, and to determine pressures within the pulmonary circuit. One of the most common reasons is to confirm the presence of a pulmonary embolus (clot) in one or more of the blood vessels in the lungs.

Abnormalities that may be detected by a pulmonary angiogram include:

- aneurysms;
- arteriovenous malformation;
- congenital heart and/or vascular abnormalities;
- foreign body in the blood vessels or vascular stenosis.