



**GHADIALI**  
General Surgery

P R E S E N T S

Dr. Mufa T. Ghadiali is skilled in all aspects of General Surgery.  
His General Surgery Services include:

- General Surgery
- Advanced Laparoscopic Surgery
- Surgical Oncology
- Gastrointestinal Surgery
- Hernia Surgery
- Endoscopy

## ANGIOGRAM

Multimedia Health Education

### ***Disclaimer***

This film is an educational resources only and should not be used to make a decision on **Angiogram**. All such decisions must be made in consultation with a physical or licensed healthcare provider.

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### MULTIMEDIA HEALTH EDUCATION MANUAL

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### INTRODUCTION

An **angiogram** is an imaging test using X-Rays that allows a doctor to see the blood vessels and the flow of blood to the heart.

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#### Unit 1:

#### Introduction

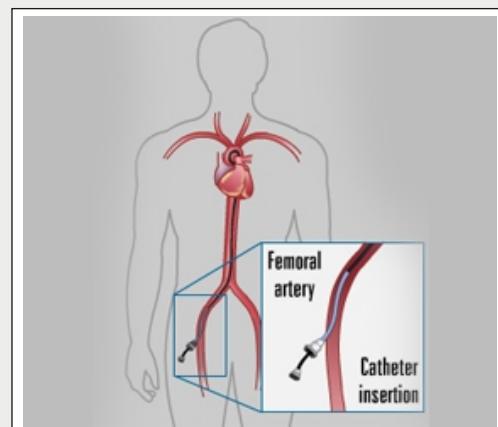
##### What is an Angiogram?

During an angiogram procedure, a special dye called contrast is injected into the blood vessels so that they can be seen on X-ray film. An angiogram can be used to look at the arteries or veins in the arms, legs, chest, or belly.

(Refer fig. 1 & 2)



(Fig.1)



(Fig.2)

#### Unit 2:

#### Purpose of Angiogram

##### Why is it Done?

An angiogram is most commonly used to detect problems within blood vessels that affect blood flow to and from the heart.

It can reveal blockages in the coronary arteries due to a buildup of plaque or due to abnormalities in the wall of the heart.

(Refer fig. 3)

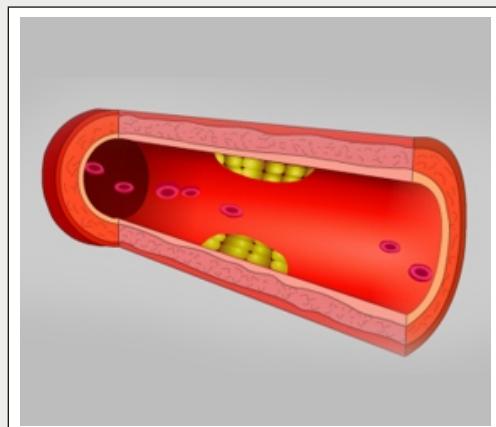
Often, Angiogram is combined with another procedure called Balloon Angioplasty.

Balloon angioplasty is performed to enlarge the inside of an artery narrowed from plaque buildup. It involves using a catheter with a deflated balloon.

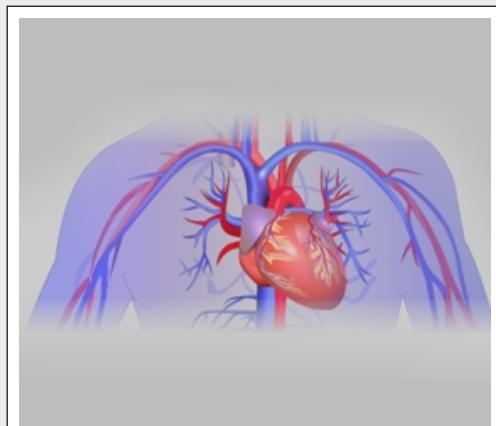
(Refer fig. 4)

Once the radiologist reaches the site of narrowing, the balloon is then inflated inside the narrowed artery to push plaque against the arterial walls allowing blood to flow more freely through the artery.

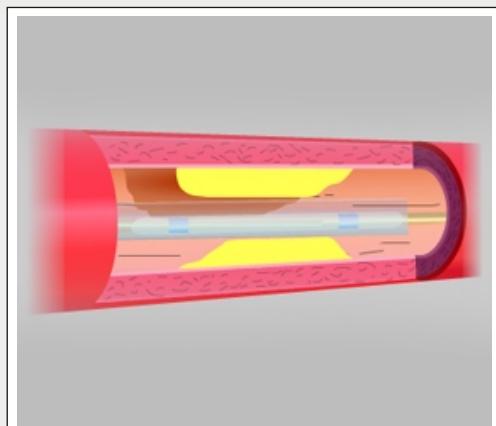
(Refer fig. 5 & 6 )



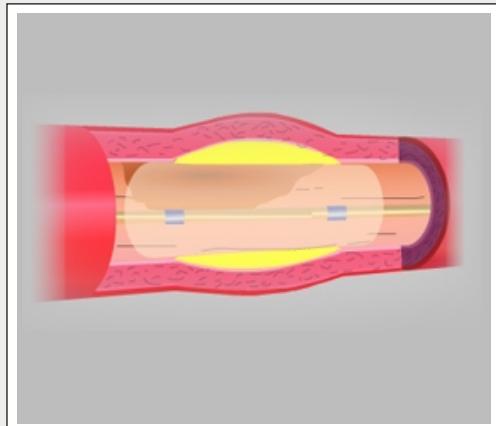
(Fig.3)



(Fig.4)



(Fig.5)



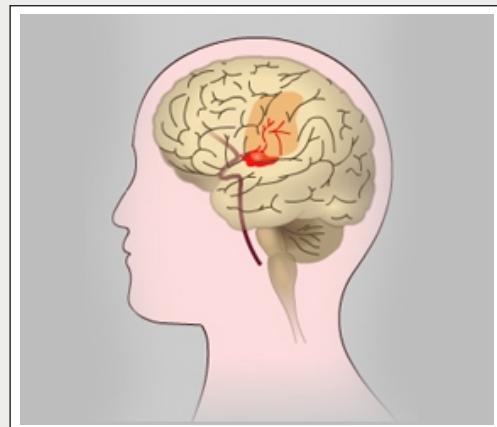
(Fig.6)

### Unit 2:

### Purpose of Angiogram

An angiogram can also be performed to investigate a bleed in the brain or identify the blood supply to a tumor.

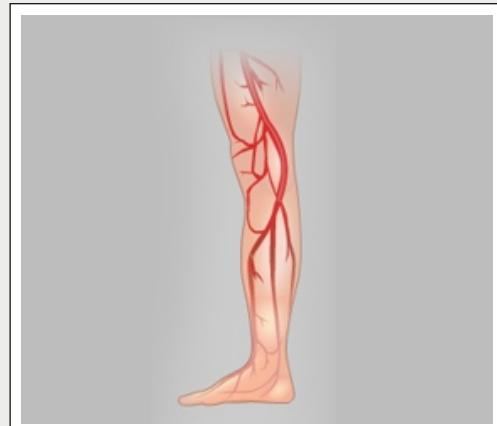
(Refer fig. 7)



(Fig.7)

An Angiogram can also be done to prepare for surgery on diseased blood vessels of the legs.

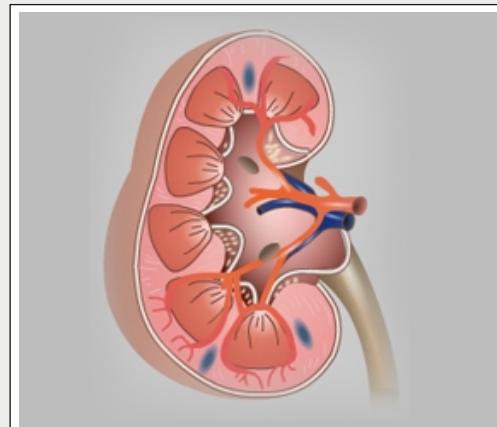
(Refer fig. 8)



(Fig.8)

It is also used to look at the condition of renal arteries before a kidney transplant.

(Refer fig. 9)



(Fig.9)

#### Unit 3:

#### Procedure

##### How do you Prepare?

You will be asked about your medical history, surgical history, current medications including over the counter medications, and any allergies. Be sure to inform your doctor if you have an allergy to shellfish or iodine.

For women, inform the doctor if there is a possibility that you could be pregnant. The doctor may ask the patients not to eat or drink several hours before the angiogram procedure.

(Refer fig. 10 & 11 )

You may be asked to undergo certain blood tests such as blood clotting (coagulation) studies to assess how well you stop bleeding.

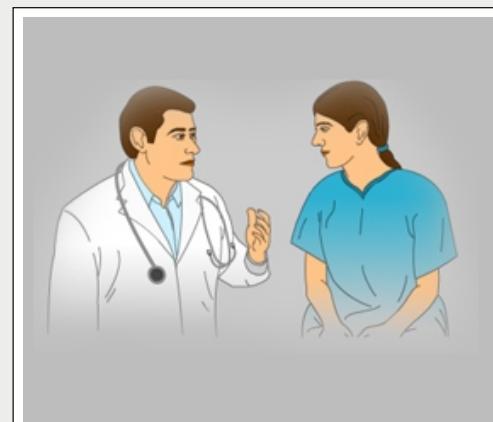
Blood urea nitrogen (BUN) may also be ordered to assess kidney function before the angiogram. Patients with a history of kidney problems may have trouble excreting the dye used for the angiogram.

Finally you need to sign a consent form that says you understand the risks of an angiogram and agree to have the test done.

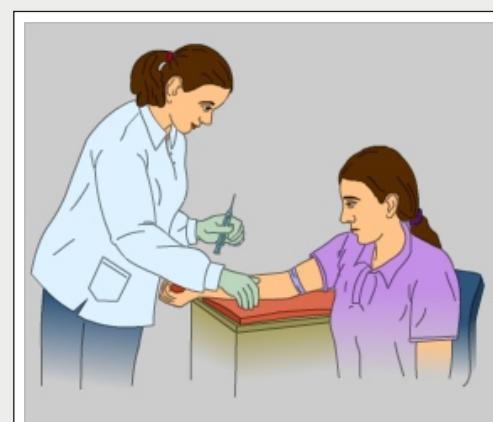
(Refer fig. 12 & 13 )



(Fig.10)



(Fig.11)



(Fig.12)



(Fig.13)

#### Unit 3:

#### Procedure

##### How is it Performed?

An angiogram is performed by a radiologist, a doctor specialized in X-ray tests. The patient is positioned on their back on the examination table by the radiologist.

The patient will have an intravenous (IV) line in a vein of his arm so that the doctor can give him medicine or fluids if needed. A device called a pulse oximeter is clipped to the patient's finger or ear to measure oxygen levels in the blood. Electrodes are placed on the arms, chest and/or legs to record the heart rate.

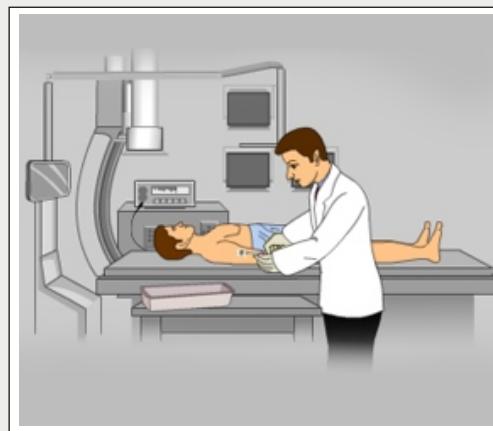
The radiologist then numbs the arm or groin area with local anesthetic prior to inserting a needle into the blood vessel. A guide wire is inserted through the needle into the blood vessel and then the needle is removed.

A thin flexible tube called a catheter is placed over the guide wire and advanced into the blood vessel. The catheter is guided through the circulatory system until the tip of the catheter reaches the area to be studied. The doctor watches the movement of the catheter in the blood vessels with the fluoroscope.

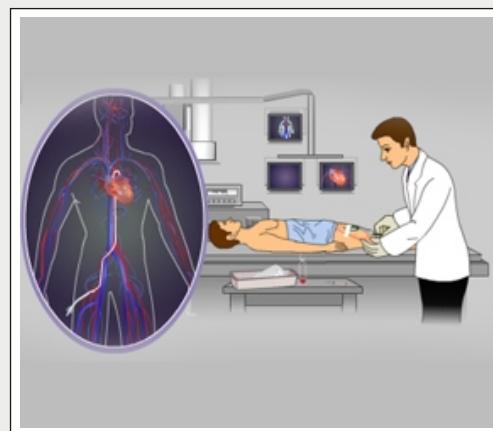
A special dye will then be passed through the catheter and a series of x-rays will be taken. The dye enables any narrowed areas or blockages in the artery to show up clearly on the X-ray pictures.

After the procedure, the catheter will be removed. Pressure will be applied to the insertion site and the patient will be asked to lie still for 20 or more minutes to prevent bleeding from the site. The patient will be able to go home after having rested for some time.

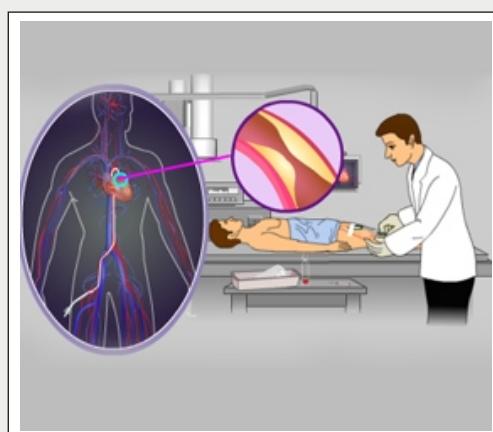
(Refer fig. 14 to 16)



(Fig.14)



(Fig.15)



(Fig.16)

#### Unit 3:

#### Procedure

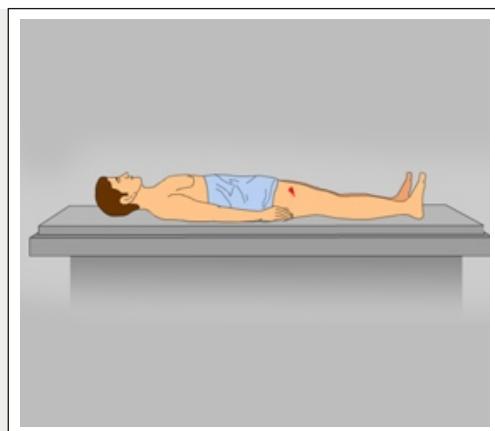
##### What are the Risks?

These include:

- Bleeding:

Bleeding may occur from the catheter insertion site and there is a possibility of bruising after the catheter is removed.

(Refer fig. 17)

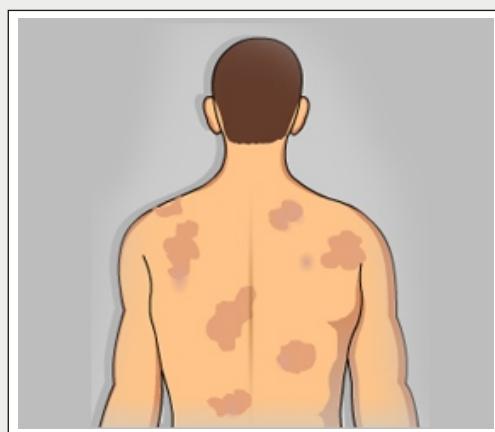


(Fig.17)

- Allergic Reaction:

Patients can have an allergic reaction to the dye used in the procedure, mainly due to the iodine content of the dye. If you are allergic to shellfish, it is important to inform your doctor prior to any procedure that uses dye.

(Refer fig. 18)



(Fig.18)

- Pregnancy:

Pregnant women should enquire about the risks of fluoroscopy harming their baby. Always tell your doctor if you are pregnant or may be pregnant before any medical procedure.

(Refer fig. 19)

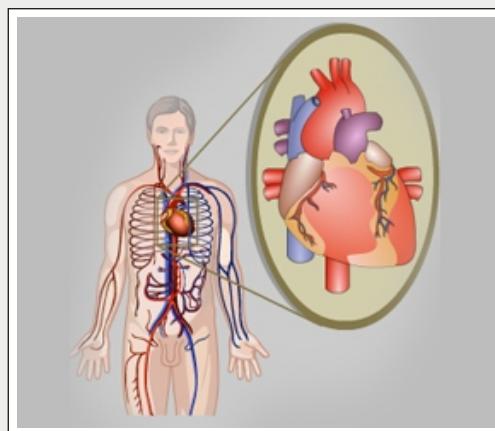


(Fig.19)

- Heart Attack:

Although rare, there is slight risk of heart attack during an angiogram.

(Refer fig. 20)



(Fig.20)

Unit 3:

Disclaimer

Although every effort is made to educate you on **ANGIOGRAM** and take control, there will be specific information that will not be discussed. Talk to your doctor or health care provider about any concerns you have about **ANGIOGRAM**.

### YOUR SURGERY DATE



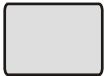
**READ YOUR BOOK AND MATERIAL**



**VIEW YOUR VIDEO /CD / DVD / WEBSITE**



**PRE - HABILITATION**



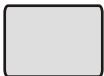
**ARRANGE FOR BLOOD**



**MEDICAL CHECK UP**



**ADVANCE MEDICAL DIRECTIVE**



**PRE - ADMISSION TESTING**



**FAMILY SUPPORT REVIEW**

**Physician's Name :** \_\_\_\_\_

**Patient's Name :** \_\_\_\_\_

**Physician's Signature:** \_\_\_\_\_

**Patient's Signature:** \_\_\_\_\_

**Date :** \_\_\_\_\_

**Date :** \_\_\_\_\_