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Paper :- CT scan Procedure

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Q No? Describe the three general Phases of tissue enhancement.

Ans Three General Phases of tissue enhancement.

(1) Arterial Phase:. Arterial Phase is also known as the bolus Phase which immediately follows by its bolus Phase. The time start to arterial Phase is 20-30 sec. The indication for Arterial Phase are Abdominal bleeding, aortic aneurysm, arterial stenosis or occlusion, hypervascular liver metastasis and Pancreatic tumour.

↳ Hence, this phase is also commonly known as bolus Phase.

P-T-0

↳ Contrast medium has not yet filled the venous structure.

↳ CT angiography Images are taken while contrast is in the bolus phases.

## 2. Venous Phase:

Also called the non-equilibrium phase which follows the bolus phase. The time taken for venous phase is 60-80 sec. The indications for venous phase are screening hypovascular liver metastases, abscesses, ~~and~~ venous thrombosis. It is characterized by a difference of 10-30 HU.

## 3. Delayed Phase:

Also known as the equilibrium phase. The time taken for the 6-10 mins. The indication for delayed phase are ureteral obstructions or leaks and characterization of liver tumours.

② (2)

(1) Hand.

Dorsal arch veins

Dorsal arch veins are best seen on the back of the hand, but are usually larger and easier to see and palpate over the back of the hand wrist. Skin entry should be more distally. IVs inserted here are easily splinted and any infiltration easily spotted, so these veins are the preferred site.

(2) Cubital fossa :-

Median antecubital, cephalic and basilic veins. Median antecubital, cephalic and basilic vein are easy to hit and tend to last quite well if splinted properly. These veins are the preferred sites for insertion of percutaneous central venous catheters.

These should be avoided unless absolutely necessary in any infant likely to need long term IV therapy.

(3) Foot :-

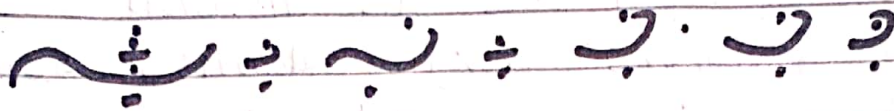
Dorsal arch

Dorsal arch veins are small, but easily cannulated and last surprisingly well. The vein on the lateral aspect, running below malleolus, is easy to access but must be splinted carefully and watched for infiltration.

P-T=0

(4) Leg:

Saphenous vein at the knee.  
The saphenous vein runs just behind the medial aspect of the knee and is often visible behind the knee and as it curves around the top of the tibia. Access is easy and lasts well if properly splinted.



Q3

Ans

### Symptoms of idiosyncratic reaction.

Mild:

Self-limiting manifestations that usually resolve without any specific treatment. eg. nausea, vomiting, flushing, pruritus, mild urticaria, and headache.

Moderate:

Symptoms that are more prominent and demand medical attention with specific treatment. eg. marked urticaria, severe vomiting, laryngeal edema and vasovagal attacks.

Severe: Reactions that usually represent a progression of the moderate symptoms and are life-threatening.

P-T-O

eg respiratory arrest, Cardiac arrest,  
Pulmonary edema, hypovolemic shock.

## Symptoms of chemotoxic reactions.

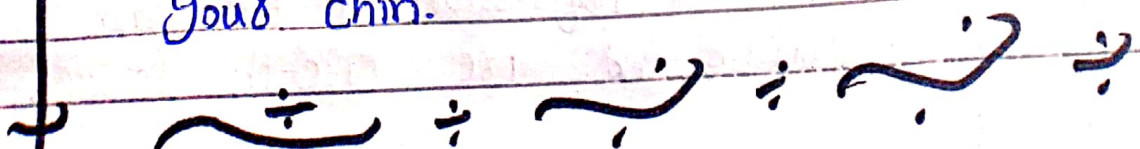
Chemotoxic or Physiologic reactions are related to the chemical properties of radiocontrast agents and are dependent upon dose and infusion rate. These include vasovagal reactions, seizure, arrhythmias and organs especially renal toxicity.

↳ Delayed hypersensitivity reactions to contrast media are defined as reactions that appear between one hour and seven days after administration of the contrast agent.



Q (4)  
Ans

A Patient is being positioned for a routine scan of the brain. He asked to tuck his chin down towards his chest to reduce the radiation exposure to the lens of the eyes. You must remain very still during the procedure to reduce motion artifacts and do not up and down your chin.



Q

5

Ans

while acquiring Coronal Images directly by Positioning the Patient's head Vertically in the base of CT scanner. Scanned is useful for defining the anatomy of the Sinuses.



Q

6

Ans

### Intracranial hemorrhage:

- ↳ Intracranial hemorrhage is a Potentially Life threatening neurological condition.
- ↳ On CT scanning, the appearance of intracranial blood is determined by density changes which occur over time, reflecting clot formation, clot retraction, clot lysis and eventually, tissue loss. Intracranial hemorrhages can be ~~seen~~ subdivided into intracerebral and extracerebral ~~and~~ type.

They also known as Intraparenchymal hemorrhages. During the early hours of hemorrhage, the CT density values within the hematoma rapidly increase.

In large hematomas, a horizontal fluid level is observed in the hyperacute and acute phase. This is the effect is called the hematocrit effect.