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class ID : 14077

program : BS Radiology 6th Semester

Subject : CT Clinical procedure

Department : A-H-S

~~Instructor~~

Instructor : Ms Maheen gull

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QNO (1) In Which circumstences is Liver tripasic perfored? What the genrale protocol for Liver tripasi examination?

ANS:- **Indication:-**

The Rule follow up Liver for hypervascular metastases from the following:

- O primery liver tumor
- O Renal cell carcinoma, Lieomyosarcoma, thyroid tumors carcinoid and other neuroendocrine tumor.
- O Melanoma and brest
- O pancreatic islt cell tumor. (GIST)

patient preapration:-

4-hr fast

positive oral contrast 60/45/30/15 min prior remainder immediatly prior to Scan.

H_2O may be sutable alternative [750 ml 3 min prior 250 ml immediatly to Scan)

Supine / Feet First /

Imaging protocol :-

Scan slice thickness	0.5mm ×64 (1mm ×32)
pitch	Standard
Kv	120
mA	Exposure 3D Standard
Rotation time	0.5s [0.75s]

Scan range :-

	Arterial phase	portal venous phase
Start	Top of higher hemidiaphragm	Top of High diphram
End	iliac crests	Below isthium
plan	Straight gantry	Straight gantry

Contrast :-

volume : 70-120 ml (depending on patient weight)

Rate : 4ml/s

Delay : Start min 180 HU in abdominal aorta + 10s

portal venous 65s fixed delay

Image reconstruction :-

5/5 mm Body Standard Axial

volume Body Standard volume.

Reformatting:

Multiview	coronal	Sagittal
Start	posterior	left
End	Anterior	Right
thickness	4mm	4mm
Spacing	4mm	4mm

Q No (2)

(ii)

ANS Indications :->

Sinusitis, polyps, post-nassal drip facial bones anosmia

patient preparation:

Supine / Head First taking care to position head symmetrically. Always ask if patient has had previous surgery and it was performed and document.

Imaging protocol:

Scan slice thickness	0.5 mm x 64
pitch	detail
KV	120
MA	150
Rotation Time	0.5s

Scan range

Start	Below maxillary sinuses
End	Above frontal sinuses
plane	parallel to hard palate

Image reconstruction:

5/5 mm	Bone Sharp
volume	Bone Sharp

Reformatting

Multiview	Coronal	Sagittal
~~Start~~ plane	perpendicular to hard palate	perpendicular to hard plate
Start	Anterior to frontals	medial wall of left orbit
~~End~~		
End	posterior to Sphenoids	medial wall of right orbit
Thickness	3mm	3mm
Spacing	3mm	3mm

(iii)

Q NO 3 (3)

Ans (iii) Indication :-

Low Back pain (LBP) Sciatica, femoral neuralgia, Spinal canal Stenosis.

patient preperation :

Supine / Feet First, Sponge under knee they can be scanned in lateral decubitus or prone position if unble to lie Supine

Imaging protocol :

Scan Slice thickness	0.5 mm x 64 Detect
pitch	
Kv	135
mA	Exposure 3D High Quality
Rotation time	1.0s (1.5s)

Scan range :-

Levels Specified other wise
Routine L2 - S1
If patient < 80 y.o then L3-S1 Unless
Specific Symtoms L2-3

Start Above pedicel of L2

End Below S1 (increase Scan ~~range~~ range to obtain sufficient data for MPRs for L5 S1 disc

Image reconstruction :-

3/3 mm → Sagpine thoracic - lumber
3/3 Bone Standard
volume Spine thoracic lumber

Reformatting :

use Spine perogram in MPR

(iv)

Q NO 4

Ans

(4)

Indications:-

Tarsal indication talar clameal pathology, ankle joint pathalogy, lose bodies.

Patient preparation:

supine/Feet First, ankle of interest at center OF FOV. other Leg bent up. Ankle/Foot Immobilized.

Imaging protocol: [Ankle/Foot 2mm (0.5mm)]

Scan Slice Thickness	0.5 mm x 64
pitch	Detail
KV	120
MA	100
Rotation Time	0.5 s

Scan range:

Start	Above Ankle joint
End	below Calcaneum
plane	Straight gantry

Image reconstruction:

2/2 mm	Bone	Sharp
Volume	Bone	Sharp
Volume for 3D	Soft Tissue	Standard

Reformatting:-

	Coronal	Sagittal
plane	True Coronal	True Sagittal
Start	Posterior to Calcanum	Lateral to Febula
End	Anterior to navicular	Mediat to Tibia
Thickness	2 mm	2 mm
Spacing	2 mm	2 mm

Comments:-

97 Frautured then 3D are required.

Q No 5

Ans 7 **Indication :-**

The Investigation CAD assessment of coronery Stents

Note We recommend our To Step guide to Coronty CTA for detailed instruction for performing these Studies.

Image patient position/set up

Supine/Feet First

ECG dots placed on the chest, arms above head.

Imaging protocol:

Scan Slice thickness	0.5 mm x 64
pitch	Determined by cardio TM
kv	~~400~~ 130
mA	400
Rotation	Determined by cardio

Scan range:

Start — coring
End — Below apex of Heart
plane — Straight gentry

Contrasts:

~~pre~~ phase 1 — xx ml @ 4.5 ml/s
phase 2 (Saline) — 50 ml @ 4.5 ml/s
xx = (scan time + 10) × injection rate

Image reconstruction:

Use Image at to determine the optimal phase for motion free Images

⇒ Volume Cardio CTA

Comments:

~~sua~~ Cardio : Should be used to ensure that the pitch rotation Speed and reconstruction method optimized for the Scan.

The End