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Subject CT procedure

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program BS Radiology 6th

①

Q No. 1:- In which circumstances is liver triphasic examination performed?

Ans:- Liver Triphasic Examination:-
50 TDS-CT and CTA/CTPA were performed in 49 patients. After an initial examination without enhancement the first scan was initiated 15-25s after the peripheral bolus injection of contrast medium. The second scan after a interscan delay of 20-35s. By this means the liver was imaged in different phases of perfusion. In the course of the CTA/CTPA-exam the imaging was carried out after selective intraarterial application of contrast agent.

Results:- The differentiation of the perfusion phases succeeded in 70% of the patients. When compared

P10

(2)

with standard CT which images only the portal venous phases, the new technique which additionally shows the arterial perfusion, accomplished an increase in sensitivity for hypervascular lesions (51% vs 60%) yet in comparison with CTA/CTPA fewer lesions could be detected (87 vs. 138). ~~agent~~ Furthermore, by documenting the contrast agent kinetics, characterization of the lesion was also facilitated.

Part:iii:- What is general protocol for liver triphasic examination?

Ans:- Triphasic CT Scanning of the liver was performed with CTiPro GE Medical system and Toshiba X-Vision single Slicer CT Scanner at 120 kVp and 200-250 mAs in ARV and SIUT respectively.

MPTO,

Q No: 2: Patient age of 45 years Complain of anosmia which CT procedure is performed and such case an explain the complete protocol for the Examination?

Ans: Protocol:

The slice thickness for anosmia is required 0.5mm x 0 and multi used 120kvp and 150mas for diagnosis of anosmia and the rotation time is required 0.5 second.

Scan Range:

The scan range is start from below maxillary sinuses and end above the frontal sinuses and plane parallel to hard palate.

Reformatting:

Multiview / Plane	Coronal	Sagittal
Start	perpendicular to hard palate anterior to frontal	perpendicular to hard palate medial wall of left orbit
End	posterior to sphenoid	medial wall of right orbit
Thickness	2mm	2mm
space is	2mm	2mm

(4) (5)

from the bottom proximally through the ankle joint using one of the following CT machines: All examinations were performed without intravenous contrast enhancement. Axial, direct coronal and sagittal reformatted images were obtained in cases before the 64-channel CT machine equipped available. In cases after the 64-channel CT become available, the raw axial 2D CT data were uploaded to work station, and volume-rendering software was used to the ~~reconstruct~~ the sagittal and coronal ~~planes~~ planes using a standard algorithm.

Q (1) No 38-

Ans:

imaging and protocols-

Scan Scan Slice thickness is
about 0.5mm x 64 pitch required detail
kvp 135 and mAs sure exposure
30 high quality rotation time
(1.05) (2.55)

Scan Range:-

Levels specified otherwise
outline L2-S1 if patient
less than 30 years than L3-S1
unless specific symptoms L2-3
start above pedicle of L2
end ~~above~~ below S1V increase
scan range to obtain sufficient
data for MPRS for L5-S1
dise)

Image Reconstruction
3/3 mm Spine Thoracic Lumbar
3/3 mm Bone Standard
Volume Spine Thoracic Lumbar

Reformatting:
use Supine program in mpr

(b)

Q No 48 - Write the patients positioning and examination protocol for the City CT procedure advised for tarsal Coalition ?

Ans - Patients positioning procedure for tarsal Coalition :-

Both feet should be positioned symmetrically in the gantry and should be imaged simultaneously. The coronal images may be obtained in a plane perpendicular to the plantar surface of the foot, or, as described by, in a plane perpendicular to the plane of the subtalar joint.

Protocol :-

All patients were positioned supine on the examination table with the bottom of the affected foot placed against a positioning box. Each affected foot was scanned.

P.T.O

(17)

Patients were given I/V Contrast of 1.5 ml/kg with overall dose ranging from 80-100 ml according to departmental protocol. Patient preparation also included administration of 2000 ml of water/gastrografin 30-60 minutes prior to the examination used as oral contrast.

After oral and injection of intravenous contrast material liver was scanned in arterial (scanning delay 30-40 seconds), portal (scanning delay 60-90 seconds) and equilibrium (scanning delay 2-5 minutes) phases. Enhancement of each lesion in each phases was evaluated and the lesions were tabulated according to hyper enhanced, hypo enhancement, iso-dense to liver parenchyma and mixed enhancement pattern.

skin slice Thickness 2.5 mm x 64

pitch required detail

→ KV required 120

→ MA required 1A

→ Rotation Time 0.5 S

Q NO 5:

ANS: CT Angiography,

The doctors advise
The CT Angio graphy

for The diagnosis of
of CAD and assessment
of agents stents, and
recommended our 10 steps
to guide coronary Angiography
for detail.

Imaging protocol: (0.5mm)

→ The scan slice thickness
as 0.5 mm x by

→ Pitch determined by
Sure Cardio IM

→ KVP adjusted 120

→ And mas about 400

→ Rotation Time deter-
mined by Sure Cardio,

etc

Tab: Cal Safe (Cal...)
Tab: True V...
Tab: ...

(9)

Scan Range:
→ CTA scan range
Start from carina. End at the apex of the heart. Also with the straight gantry.
Below the plane

Contrast
Single phase contrast protocol
Phase 1 xx ml at 4-5 ml/s
Phase 2 Saline 50 ml at 4-5 ml/s
 $xx = (\text{Scan Time} + 10) \times \text{injection rate}$

Image Reconstruction:
Use Image x out to determine the optimal phase for images.
Volume cardiac CTA

Next
Tab: Tramadol
Not V...
Neura