

Q3 Submitted By :- ZAKIR ULLAH

Q3 Submitted To :- MAM MAHEEN GUL

Q3 Assignment :- VIVA, CR, DR.

Q3 I D :- 16822.

Q: 1:

⇒ Digital Subtraction ofAngiography :-

1) This is Fluoroscopy Technique

in interventional Radiology

To clear view of Blood

vessels Bony or Dense

Soft Tissue

2) using the Contrast

media image are produce

By a Subtraction pre-

Contrast image.

(P - I = 0)

e) when the contrast media
introduce into a structure
then called "Digital
Subtraction Angiography"

i) Subtraction Angiography was
first describe in 1935
in england.

Q: 3:-

⇒ DisAdvantages of

DR :->

1) Expensive equipment.

(Q-10)
↓

- 2) Not portable.
- 3) High radiation exposures.
- 4) poor quality films.
- 5) logistics.
- 6) learning Curve to
Adapt to New Technology.
- 7) unnecessary exposure.
- 8) error prone.
- 9) High Risk to GI Side
effects.

Q. 2:

⇒ Common artifacts in

DR :-

1) over exposure.

2) dead pixel artifact.

3) Signal Dropout :-

large

area loss of signal - due

to Detector Drop.

4) incorrect Detector :-

up side

down the cassette.

1) Spoke like radiopaque line.

2) Grid-line :-

faint grid line

(P-I-O)

(5)
present on an image, with

no grid cut off.

6) electronic Shutter failure:

→ The Digital image after

will have obscuresly

shaped light collimation that

defies logic.

→ often a complex error

recollimation post exam.

(Should be explored before
reexamination).

7) Stitching Artifacts:

occur when
two separate DR or CR image are
merged into a single image.

Q: 5:-

The image receptor of
Conventional Radiography:-

The Conventional Radiography image receptor consist of the film mounted in contact with one or two intensifying screen. intensifying screen are thin sheet of fluorescent materials.

The screen film combine is housed in either

(P-T^o)
↓

a film Changer or Cassette.

They absorbed the x-ray energy by the intensifying screen. and then it

convert into light - The light is then to exposes

on the film. The uses of intensifying screen

Because the film is much more sensitive to light (200 times)

(P-T-O)
↓

→ when uses of double
 intensifying screen increase
 x-ray absorption & receptor
 sensitivity with least
 amount of blurring image.

image Receptor of Double Digital Radiography :-

This is the form of
 matrix of pixel element
 which work on Based

(F-0)
 →

Certain ⁽⁹⁾ technologies like

Solid State & photoStimulable

phosph. when the pixel

is exposed by x-ray

passing the patient x-ray

photons are absorbed &

produce energy a electrical

signal this signal is

the form of analogue data

then convert to digital

number in store a

pixel an image -

(P-T-O)
↓

→ 3 type of Solid State Sensors are use. (C.C.D, T.F.T, and Complementary metal oxide.

→ PSP :: Coated on the top of the plate.

latent image is formed.

latent image is convert

to digital image by

laser light.

Q. 4. image quality of

DR :-

1) Short exposure time :-

possible to control voluntary
& involuntary movement.

2) Small focal spots :-

whenever possible to
improve detail.

3) Faster film screen speed.

4) OID :-

use shorter to
improve detail.

5) SID :- larger to improve detail.

b) minimum repeat radiograph.



image quality of CR:

1) Film Based.

2) Film is placed between
the Screen.

3) use of intensifying
Screen

4) Film processed Chemically

5) Required Physical handling

& Storage.

(P-F)

