**NAME ASIF SIJJAD**

**ID 6967**

**PROGRAM BS (RAD)**

**Q1…………..???**

**IN the given image of radiograph there is …**

**ACUTE MCA INFARCTION**

**And T2 AXIAL.**

**EXPLANATION…**

**Stroke is described as a sudden neurological deficit which results from a cerebrovascular event. The middle cerebral artery (MCA) is the largest cerebral artery and is most commonly affected by a cerebrovascular accident. A middle cerebral artery(MCA) stroke is the sudden onset of focal neurologic deficit, caused by   infarction or ischemia in the territory supplied by the middle cerebral artery. MRI with diffusion weighted imaging is highly sensitive for early diagnosis of MCA infarction.**

**MRI APPEARANCE..**

**After 24 hours post stroke, middle cerebral artery(MCA) strokes appear as low signal intensity on T1-weighted images and high signal intensity on T2-weighted and FLAIR images. Infarctions appear as hyperintense on T2 and FLAIR images due to the development of  cytotoxic and vasogenic oedema in the stroke  area after 24 hours.**

**Typical appearance of affected area in the event of early stroke**

**T2 and FLAIR images will be normal  
T1 images will be normal  
DWI b value 0 will be normal  
DWI b value 1000 will be hyperintense  
ADC map will be hypointense**

**Typical appearance of affected area 24 hours post stroke**

**T2 and FLAIR images will be hyperintense  
T1 images will be hypointense  
DWI b value 0 will be hyperintense  
DWI b value 1000 will be hyperintense  
ADC map will be hypointense**

**Q2……???**

**IN The given image of radiograph there is ….**

**SUBDURAL HAEMORRHAGE**

**And T1 CORONAL.**

**EXPLANATION..**

A subdural haemorrhage is an extra-axial bleed found between the dura and arachnoid mater.  
Aetiology: Trauma, idiopathic.

Clinical presentation: Headache, change in mental state, neurological deficits.

MRI appearance:

Crescent shaped. MRI is most sensitive to the subacute and chronic cases with FLAIR being the most sensitive sequence.

T1:  
Acute - Hypointense to isointense  
Subacute - Hyperintense  
Chronic - Hyperintense

T2:  
Acute - Hypointense  
Subacute - Hypointense to hyperintense  
Chronic – Hyperintense

FLAIR: Hyperintense at all stages

**Q3……???**

**IN The given image of radiograph there is…**

**PITUITARY ADENOMA**

**And T1 SAGITTAL POST CONTRAST.**

**EXPLANATION..**

Pituitary adenomas are tumours that arise in the pituitary gland.

Aetiology: Unknown.

Clinical presentation: hormonal imbalances, visual disturbances.

Microadenomas - less than 10mm

Macroadenomas -greater than 10mm

MRI appearance:  
T1: Hypointense  
T2: Unpredicatble variable signal  
T1 contrast enhanced: Hyperintense

**Q4……???**

**In the given image of radiograph there is…..**

**LIVER HAEMANGIOMA**

**And T2 TSE FAT SAT AXIAL.**

**EXPLANATION..**

Haemangiomas are the most common benign tumour of the liver.  More common in females.  The prevalence in general population ranges from 2% to 20%.

The cause of Haemangiomas is unclear. It is consisting of blood-filled vascular cavities lined by endothelial cells.

Haemangiomas are often incidentally discovered during imaging and most patients are asymptomatic and require no treatment. Large Haemangiomas may cause symptoms secondary to extrinsic compression of adjacent organs.

MR Imaging features of typical Cavernous Haemangioma:

T1: homogenous hypointense  
T2: homogenous markedly hyperintense(referred to as light bulb sign)  
Post contrast: enhancement features depend on the size of the lesion, homogeneous  arterial phase enhancement  (<1.5 cm) or interrupted peripheral  nodular enhancement (>1.5 cm) with centripetal progression to uniform enhancement  
Hepatobiliary phase:  hypointense.  
DWI: hyper intense with low b values (T2 shine through). Iso-intesne with high b vaule and on ADC map.