

DEPARTMENT OF NUCLEAR MEDICINE

MRDNO	:251198	Patient Name	:Mr. DEVENDRA CHORDIYA
Age/Gender	:58 Yrs. /M	Dept Ref No	:908859
Referred By	:Hemato-Onco and BMT Unit	Bill Date	:15/05/2015
Bill No	:15-16/2112112	Bed No	:5512B
Result Date	:16/05/2015	Scan Date	:16/05/2015 09:37

WHOLE BODY PET/CT WITHOUT CONTRAST [BLK]

DEPARTMENT OF NUCLEAR MEDICINE & PET/CT

Name	:	DEVENDRA CHORDIYA	Date	:	15/05/2015
Age/Sex	:	58 YRS/MALE	PT No.	:	

BLK/PT/CT/3207/15

MRD No.	:	251198	OPD/IPD	:	IPD
Referring Doctor	:	DR. DHARMA CHOUDHARY			—

WHOLE BODY PET/NCCT SCAN

PROCEDURE: Whole body PET/CT scan was performed 60 minutes after intravenous injection of 10 mCi of ^{18}F -FDG, in a multidetector 16 slice, time of flight Discovery GE 710 PET/CT scanner from vertex to mid-thigh. A separate sequence with breath hold (deep inspiration) was performed for lung examination. Images were reconstructed using Vue Point FX and Sharp IR, and slices formatted into transaxial, coronal and sagittal views. A semi-quantitative analysis of FDG uptake was performed by calculating SUV_{max} value corrected for dose administered and lean body mass (g/ml). The patient's blood glucose (as measured by glucometer) was 127 mg% at the time of injection and body weight was 70 kg. Water was used as oral contrast and no intravenous contrast was given during the study.

CLINICAL DATA: Patient is a known case of multiple myeloma. 2 cycles of chemotherapy given till January 2014. EBRT given to D₄ - D₁₀ and 5th - 8th ribs from 08/01/2014 to

18/01/2014. On weekly injection Bortezomib, 19th dose given on 17/06/2014. PET/CT done on 16/07/2014 showed active disease involving multiple bones, bilateral axillary lymph nodes, soft tissue deposits. Chemotherapy given till August 2014. Developed lesions in both testes. Radiotherapy given to left shoulder on 01/11/2014. PET/CT done on 06/11/2014 showed residual metabolically active disease involving bones, bone marrow, left axillary lymph node, bilateral testes and bones. 2 cycles of VDT-PACE given till 17/01/2015. Antologous SCT done in February 2015. MRI done on 01/05/2015 showed intraspinal myelomatous deposits. Present PET/CT being done for **restaging**.

FINDINGS:

The overall distribution of FDG is within normal physiological limits.

Head & neck:

No focal abnormally increased FDG concentration is seen in bilateral cerebral or cerebellar hemispheres.

(Note: If there is a strong suspicion for brain metastasis then MRI is suggested for further evaluation as small lesions may not be detected on an FDG PET/CT study due to normal high physiological uptake in the brain.)

Normal physiologic uptake noted in the nasopharynx, oropharynx, hypopharynx and larynx.

Physiological uptake of FDG noted in bilateral longus coli and bilateral neck and bilateral scapular muscles.

The thyroid gland is sharply demarcated and shows homogenous pattern on the CT scan. No abnormal FDG uptake is seen in the thyroid and the neck structures.

There is no significant cervical lymphadenopathy seen with abnormal FDG uptake.

Thorax and mediastinum:

There is no supraclavicular lymphadenopathy.

Few fibrotic bands seen in bases of both lungs. Note is made of prominent bronchovascular markings.

No focal pulmonary parenchymal lesion with abnormal FDG uptake seen. There is no evidence of pleural effusion seen on either side. The trachea and both main bronchi appear normal.

Mild irregular pleural thickening noted bilaterally.

There is no significant mediastinal or hilar lymphadenopathy.

Few small lymph nodes with no abnormal FDG uptake noted in bilateral axillae.

Abdomen & pelvis:

Liver is enlarged in size with a cranio-caudal extent of 19.9 cms. It shows diffuse hypoattenuation suggestive of fatty liver. Small calcific focus noted in segment V of liver.

Gall bladder is normally distended with no evidence of intraluminal radio-opaque calculi.

No focal lesion with abnormal FDG uptake is seen in the liver, spleen, pancreas, adrenals and kidneys.

Stomach, small and large bowels appear normal in caliber and fold pattern.

No significant abdomino-pelvic lymphadenopathy with increased FDG uptake is seen.

Urinary bladder is normal in size, shape and distension.

There is no evidence of free fluid in the peritoneum.

The prostate appears unremarkable with no abnormal FDG uptake.

Musculoskeletal:

Multiple intraspinal, extra-axial soft tissue deposits noted in C₃-C₄, C₇ and D₁ vertebra, D₄-D₅ to D₁₀ vertebral levels and in sacral canal behind S₁ and S₂ vertebral bodies.

Lytic lesions with increased FDG uptake noted in head of left humerus.

Multiple lytic-sclerotic lesions with no abnormal FDG uptake noted in skull, few vertebrae, bilateral scapulae, sacrum, bilateral iliac bones, bilateral acetabuli, bilateral femurs and bilateral humeri.

There is partial collapse of D₅ vertebra. Note is made of fracture of left 6th rib posteriorly.

There is sacralization of L₅ vertebra.

Note is made of diffuse osteopenia in all the visualized bones.

IMPRESSION:

In a known case of multiple myeloma, PET/CT scan findings reveal metabolically active disease involving head of left humerus with non-FDG avid lesions in multiple bones with new metabolically active intraspinal soft tissue deposits.

As compared to previous PET/CT dated 06/11/2014, there is complete resolution of left axillary lymph node with complete metabolic resolution of nearly all bony lesions.

However, multiple metabolically active intra-spinal soft tissue deposits are a new finding.

**Dr. Alka Kumar
Senior Consultant & Head**