2nd PET Scan.

Name :Mrs.W.D.B.Jayawanthi Age/Sex :37Y/F Ref. No : RC00013161

There has been increase in number and size of the lesions in head, neck and intertrocanteric region of right femur since last scan done on 23.08.2023 but, show minimal reduction in degree of FDG avidity in the current scan (SUV max of 5.02 in the current scan vs SUV max of 6.38 in the previous scan). Background sclerosis is also observed in the proximal right femur in the current scan.

Rest of the lesions in axial and appendicular skeleton are non FDG avid in the current scan.

IMPRESSION

No metabolically active residual lesions are identified in the left breast.

There has been further increase in degree of sclerosis of the previously noted multiple sclerotic lesions of varying sizes and shapes in the axial and appendicular skeleton since last scan done on 23.08.2023. Except the lesions in L1 vertebra (which shows increase size and degree of FDG avidity of lesions) and proximal right femur (which shows increase in number and size of the lesions but, reduction in degree of FDG avidity), all other lesions are non FDG avid.

There is no pulmonary metastases, hypermetabolic hepatic or lymphnode metastases.

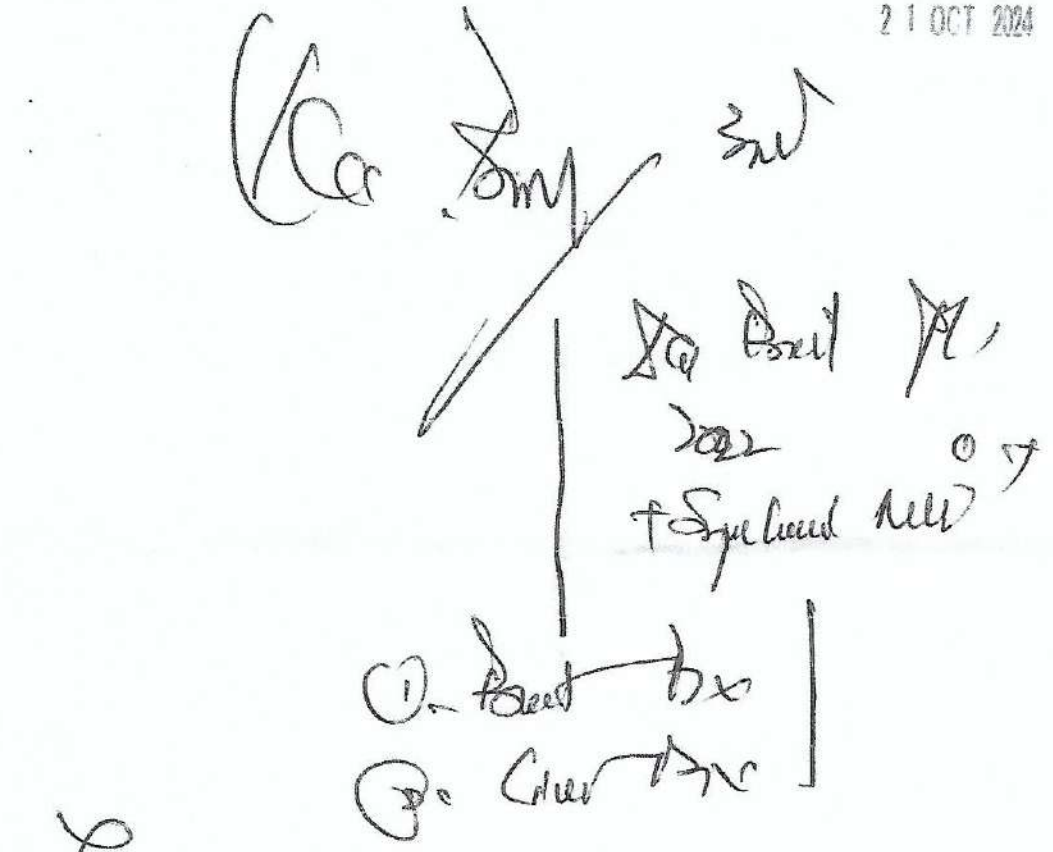
Few prominent and enlarged non FDG avid lymphnodes with preservation of it's normal fatty hila in the axillae and inguinal groups bilaterally are in keeping with reactive hyperplasia.

Evidence of diffuse fatty infiltration of the liver is more marked in the current scan.

Incidentally noted multinodular goiter involving left lobe of the thyroid gland and thrombosed ovarian veins are again observed.

Dr. S. H. Munasinghe
Consultant Radiologist

21 OCT 2024



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Whole body PET-CT Report

Name : Mrs.W.D.B.Jayawanthi	Age/Sex :38Y/F	Ref. No : RC00014424
Referred By: Dr.T.Skandarajah	PET CT No:754/24	Date: 11.09.2024

Whole body F-18 Fluorodeoxyglucose (FDG) PET CT imaging was performed from the vertex to upper calves 60 minutes following intravenous administration of 7.38 mCi of F18 FDG using GE Optima 560 dedicated 8 slice/sec PET-CT system without breath holding instruction. Intravenous contrast enhanced CT scan was performed for anatomical localization and attenuation correction. The images were reviewed in axial, coronal and sagittal projections. A semi quantitative analysis of FDG uptake was performed by calculating SUV max value corrected for dose administered and patient body weight. The blood sugar level was 113 mg/dl at the time of injection of tracer.

Indication: Known patient with metastatic invasive carcinoma of left breast diagnosed in March 2022 undergone a cycle of chemotherapy followed by hormonal therapy. She has undergone laparoscopic TAH, BSO and omentectomy on 27.04.2022 and histology revealed metastatic deposits in the ovaries bilaterally. Last PET CT scan done on 11.04.2024 revealed there were no pulmonary metastases, hypermetabolic hepatic or lymphnode metastases and except the lesions in L1 vertebra and proximal right femur, all other osseous lesions were non FDG avid. PET CT scan being done for reassessment. Images were reviewed with last PET CT scan done on 11.04.2024.

FINDINGS

Head and Neck

No abnormal areas of altered parenchymal attenuation, enhancement or altered metabolic activity are identified in the cerebral or cerebellar hemispheres or in the brain stem, which maintain it's normal CT morphology, attenuation characteristics and normal distribution of metabolic activity. The ventricular system, basal cisterns and cortical sulci are within normal limits. There are no areas of infarctions, intra axial or extra axial mass lesions.

Moderate degree of FDG avid (SUV max of 5.24) minimally sclerotic area is observed in the basi occiput. No similar areas are identified in rest of the skull base or vault of the skull.

No significant mucoperiosteal thickening, fluid levels or retention cysts are identified in the paranasal sinuses which are clear bilaterally.

The pharynx, larynx and para pharyngeal spaces maintain it's normal CT morphology and normal *distribution of metabolic activity.*

The orbits, globes, optic nerves and extra ocular muscles maintain it's normal CT morphology and normal distribution of metabolic activity.

No prominent, enlarged or FDG avid lymphnodes are identified in the neck or supraclavicular region.

Bilateral parotid and submandibular glands maintain it's normal size, shape, attenuation pattern and normal distribution of metabolic activity. No FDG avid or non FDG avid focal lesions are identified within.

Multiple non FDG avid low attenuated nodules in the enlarged left lobe of the thyroid gland which extends inferiorly upto the level of upper margin of manubrium sterni is again identified and the largest nodule in lower pole measures 3.60x2.70cm in size. Right lobe of the thyroid gland could not be identified.

Chest:

Previously noted non FDG avid, non enhancing low attenuated areas with irregular margins in the left breast laterally are again identified and some of these area show slight increase in size when compared with previous scan but, remain non FDG avid. As example the relatively larger area in the upper outer quadrant measures 12.5x6.7mm in size in the current scan. Minimal non FDG avid skin thickening in the periareolar region is again identified and remains almost unchanged. No new non FDG avid or FDG avid mass lesions, fluid collections or enlarged lymphnodes are identified in left breast or in the right breast.

Previously noted few prominent and enlarged non FDG avid lymphnodes with preservation of it's normal fatty hila in the axillae bilaterally, most likely representing reactive hyperplasia are again observed. Largest lymphnode is in the right axilla measuring 1.78cm in diameter and relatively larger lymphnode in the left axilla measures 1.50cm in diameter.

No prominent, enlarged or FDG avid lymphnodes are present in the subpectoral, internal mammary or mediastinal groups or in the hila. Great vessels of the mediastinum are within normal limits and mediastinal blood pool shows SUV max of 2.77.

No suspicious or FDG avid focal parenchymal nodules, areas of collapse or consolidations are identified in the lungs which are clear bilaterally. No bronchial dilatation is evident.

There is no pleural or pericardial effusion.

Abdomen and Pelvis

There are two moderate degree of FDG avid low attenuated areas in the liver, largest is in segment 8 of right lobe measuring 1.56x1.10cm in size with SUV max of 6.06 (image 139). Other lesion is in segment 2 of left lobe measuring 0.90x0.70cm in size with SUV max of 4.57 (image 132). No similar lesions or other focal lesions are identified in rest of the liver which shows previously observed changes of diffuse fatty infiltration with heterogeneous distribution of parenchymal metabolic activity. Hepatic parenchyma shows SUV max of 3.91. Liver is not enlarged and maintains it's smooth regular contour. Intrahepatic and extra hepatic ducts are not dilated. Portal venous and hepatic venous radicles are within normal limits. Main portal vein is normal in caliber and no filling defects are present within. Gall bladder maintains it's normal distensibility and mural thickness. No calculi are present within it.

No FDG avid or non FDG avid lesions are identified in the pancreas, spleen, kidneys or adrenals, which maintain it's normal CT morphology, attenuation characteristics and normal distribution of metabolic activity.

Uterus and ovaries are absent and are post surgical. Previously noted thrombosed ovarian veins with few foci of calcifications within the left ovarian vein are again observed and remain almost unchanged.

No prominent, enlarged or FDG avid lymphnodes are identified in the para aortic, para-caval, aorto-caval, iliac or mesenteric groups. No FDG avid or non FDG avid mass lesions or fluid collections are identified in the abdomen or pelvis. No free peritoneal fluid is present.

Normal distribution of the tracer in the small and large bowel are observed.

Few prominent and enlarged non FDG avid lymphnodes with preservation of it's normal fatty hila in the inguinal groups bilaterally, most likely representing reactive hyperplasia are again observed, largest in the left side measures 1.69cm in diameter and relatively larger lymphnode in the right inguinal group measures 1.31cm in diameter.

Musculoskeletal & Miscellaneous

Previously noted multiple sclerotic lesions of varying sizes and shapes in the axial and appendicular skeleton are again identified and some of the lesions show further increase in extent and degree of sclerosis since last scan done on 11.04.2024.

There has been further increase in number, size and degree of FDG avidity of the previously noted lesions in head, neck and intertrocanteric region of right femur since last scan done on 11.04.2024 and the lesion in greater trochanter shows SUV max of 5.79 in the current scan (SUV max of 5.02 in the previous scan).

There has been further increase in size of the known lesions in L1 vertebra since last scan done on 11.04.2024 but, shows minimal decrease in degree of FDG avidity (SUV max of 5.08) in the current scan (SUV max of 5.17 in the previous scan).

Multiple new FDG avid mixed lytic/sclerotic lesions are identified in the axial and appendicular skeleton. In the spine new lesions are identified in D3 vertebra (SUV max of 5.94), D4 vertebra (SUV max of 4.15), D6 vertebra (SUV max of 4.71), D10 vertebra (SUV max of 3.31), D11 vertebra (SUV max of 5.94), L3 vertebra (SUV max of 7.21) and L4 vertebra (SUV max of 6.37). Relatively larger lesions are identified in body of S1 segment (SUV max of 6.31) and left ala (SUV max of 6.10). Height of the vertebral bodies are within normal limits. There are no associated para vertebral or epidural mass lesions.

Similar FDG avid new lesions are identified in proximal humeri (SUV max of right and left humeri 2.72 and 3.36 respectively), right side of the manubrium sterni (SUV max of 2.55), Few ribs (eg SUV max of left 5th rib anteriorly 3.26) hemipelvices (SUV max of right and left iliac bones 4.35 and 3.46 respectively, SUV max of right ischium and pubic bone 4.82 and 3.12 respectively, SUV max of left inferior ischio-pubic ramus 2.80), head and neck of left femur (SUV max of 3.57). There are no associated para osseous soft tissue component.

IMPRESSION

No metabolically active recurrent lesions are identified in the left breast. However, slight increase in size of some of the previously noted non FDG avid, non enhancing low attenuated areas with irregular margins in the left breast laterally warrant US scan of the breast ± image guided biopsy.

Previously noted multiple sclerotic lesions of varying sizes and shapes in the axial and appendicular skeleton are again identified and some of the lesions