Department of Nuclear Medicine and PET
All India Institute of Medical Sciences, New Delhi, India.

^{18}F-FDG WHOLE BODY PET-CT STUDY

Patient Name: DEVYANSH		**Age/Sex: 8 months/M**
Study ID: FDG/17779/21	**UHID: 105589851**	**Date: 06.10.2021**

Indication: LCH. Baseline scan.

Procedure: PET-CT acquisition was done 60 minutes after injection of 10 mCi ^{18}F-FDG by intravenous route, from the level of orbits to mid-thigh. CT was done for attenuation correction and anatomical localization.

PET-CT Findings:

Head and Neck: *Multiple FDG avid subcentimetric and centimetric lymph nodes noted in bilateral cervical level IA, bilateral IB, II-V region, largest ~ 1.1x0.6 cm in left level II region - infective.*

Thorax: *Multiple FDG avid subcentimetric bilateral axillary level I-II lymph nodes noted. Enlarged thymus with diffusely increased FDG uptake noted.* Physiological FDG uptake is seen in the myocardium. No abnormal FDG uptake noted in the lungs, mediastinum and thoracic wall. Lungs, large airways, pleura, heart, great vessels and other mediastinal structures appear normal on CT.

Abdomen-Pelvis: *Hepatomegaly noted (CC ~ 10.6 cm).* Normal FDG distribution is noted in the liver, spleen, kidneys, gastrointestinal tract and urinary bladder. Biliary ducts, gall bladder, spleen, kidneys, stomach, adrenals, pancreas, retroperitoneum, bowel and urinary bladder appear normal on CT. No ascites is noted.

Musculo-Skeletal System: **FDG avid lytic lesions noted in bilateral parietal, left 5th rib, D7 vertebra (with collapse), right ala of sacrum and bilateral ilium. FDG avid lytic lesions with surrounding soft tissue component noted in left temporal bone with opacification of left mastoid air cells. FDG avid lytic lesions noted in shaft and neck of left femur & shaft of left tibia with periosteal reaction. FDG uptake with no significant bony change noted in right humerus – bone marrow.**

IMPRESSION:

- **Metabolically active lytic skeletal lesions as described – primary skeletal LCH.**

Dr. Angel Hemrom
Senior Resident

Dr Madhavi Tripathi
Consultant

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^{18}F-FDG WHOLE BODY PET-CT STUDY

Patient Name: DIVYANSH		Age/Sex: 10 months/M
Study ID: FDGN/27787/22	UHID: 105589851	Date: 30.05.2022

Indication: LCH, post chemotherapy, for response evaluation.

Procedure: PET-CT acquisition was done 60 minutes after injection of 10 mCi ^{18}F-FDG by intravenous route, from the level of orbits to mid-thigh. CT was done for attenuation correction and anatomical localization.

PET-CT Findings:

Head and Neck: *Multiple FDG avid lymph nodes noted in bilateral II region, - likely infective.* Visualized paranasal sinuses, skull base, pharynx, larynx and thyroid do not show any abnormality on CT.

Thorax: Physiological FDG uptake is seen in the myocardium. Lungs, large airways, pleura, heart, great vessels and other mediastinal structures appear normal on CT.

Abdomen-Pelvis: *Hepatomegaly noted (CC ~ 10.6 cm).* Normal FDG distribution is noted in the liver, spleen, kidneys, gastrointestinal tract and urinary bladder. Biliary ducts, gall bladder, spleen, kidneys, stomach, adrenals, pancreas, retroperitoneum, bowel and urinary bladder appear normal on CT. No ascites is noted.

Musculo-Skeletal System: *Lytic sclerotic lesions with no significant tracer uptake noted in bilateral parietal bones, left proximal femur and left proximal tibia. D7 vertebra collapse noted.*

IMPRESSION:

- **No definite scan evidence of metabolically active disease in the present study. Minimal residual disease can not be completely ruled out.**
- **As compared to previous PET CT study, (FDG/17779/21, dated 06.10.2021), there is resolution of previously noted skeletal lesions- suggestive of complete metabolic response..**

Dr. Sambit Sagar
Senior Resident

Dr Kh. Bangkim Chandra
Consultant

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All India Institute of Medical Sciences, New Delhi, India.

^{18}F-FDG WHOLE BODY PET-CT STUDY

Patient Name: DEVYANSH		Age/Sex: 10 months/M
Study ID: FDGN/26614/21	UHID: 105589851	Date: 04.12.2021

Indication: LCH, post chemotherapy, for response evaluation.

Procedure: PET-CT acquisition was done 60 minutes after injection of 10 mCi ^{18}F-FDG by intravenous route, from the level of orbits to mid-thigh. CT was done for attenuation correction and anatomical localization.

PET-CT Findings:

Head and Neck: *Multiple FDG avid subcentimetric lymph nodes noted in bilateral cervical level IA, bilateral II-V region, - likely infective.* Visualized paranasal sinuses, skull base, pharynx, larynx and thyroid do not show any abnormality on CT.

Thorax: *Increased FDG uptake noted in thymus - physiological.* Physiological FDG uptake is seen in the myocardium. Lungs, large airways, pleura, heart, great vessels and other mediastinal structures appear normal on CT.

Abdomen-Pelvis: *Hepatomegaly noted (CC ~ 10.6 cm).* Normal FDG distribution is noted in the liver, spleen, kidneys, gastrointestinal tract and urinary bladder. Biliary ducts, gall bladder, spleen, kidneys, stomach, adrenals, pancreas, retroperitoneum, bowel and urinary bladder appear normal on CT. No ascites is noted.

Musculo-Skeletal System: **Mildly FDG avid lytic lesions noted in left temporal bone, left 6th rib, left ilium, shaft of left femur & left tibia with periosteal reaction. Lytic lesions with no significant tracer uptake noted in bilateral parietal, D7 vertebra (with collapse), right ala of sacrum and right ilium.**

IMPRESSION:

- **Mildly metabolically active lytic lesions in left temporal bone, left 6th rib, left ilium, shaft of left femur & left tibia – residual disease.**
- **As compared to previous PET CT study, (FDG/17779/21, dated 06.10.2021), there is reduction in metabolic activity and soft tissue component of the lytic lesions, suggestive of partial response.**

J. Sai Moulika
Dr. J. Sai Moulika
Senior Resident

Madhavi Tripathi
Dr Madhavi Tripathi
Consultant

Department of Nuclear Medicine and PET
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^{18}F-FDG WHOLE BODY PET-CT STUDY

Patient Name: DIVYANSH		Age/Sex: 8MONTH/M
Study ID: FDG/18976/22	UHID: 105589851	Date: 25.02.2022

Indication: K/c/o LCH – post chemotherapy. FDG PETCT for treatment response assessment.

Procedure: PET-CT acquisition was done 60 minutes after injection of 10 mCi ^{18}F-FDG by intravenous route, from the level of orbits to mid-thigh. CT was done for attenuation correction and anatomical localization.

PET-CT Findings:

Head and Neck:. *Mildly FDG avid lymph nodes noted in the left level II&III region - ?reactive.* Visualized paranasal sinuses, skull base, pharynx, larynx and thyroid do not show any abnormality on CT.

Thorax: *Few sub-centimetric bilateral axillary lymph nodes noted with preserved fatty hilum.* Physiological FDG uptake is seen in the myocardium. No abnormal FDG uptake noted in the lungs, mediastinum and thoracic wall. Lungs, large airways, pleura, heart, great vessels and other mediastinal structures appear normal on CT.

Abdomen-Pelvis: Normal FDG distribution is noted in the liver, spleen, kidneys, gastrointestinal tract and urinary bladder. Liver, biliary ducts, gall bladder, spleen, kidneys, stomach, adrenals, pancreas, retroperitoneum, bowel and urinary bladder appear normal on CT. No ascites is noted.

Musculo-Skeletal System: **FDG avid lytic lesions noted in the sternum(with soft tissue component), medial end of left clavicle, C7 vertebra, right 11th rib and left femur.** Physiological FDG distribution is seen in rest of the visualized axial and appendicular skeleton.

IMPRESSION:

- **Metabolically active lytic skeletal lesions in sternum, left clavicle, C7 vertebrae, right 11th rib and left femur – residual disease.**
- **As compared to previous scan FDGN/26614/21(dated 04.12.2021), there is left femoral lesion is persistent and appearance of new skeletal lesions as described above – suggestive of progressive disease.**

Dr. Sivasankar K V
Junior Resident

Dr Shamim A Shamim
Consultant

Department of Nuclear Medicine and PET
All India Institute of Medical Sciences, New Delhi, India.

^{18}F-FDG WHOLE BODY PET-CT STUDY

Patient Name: DEVANSH		Age/Sex: 2Y/M
Study ID: FDG/21336/22	UHID: 105589851	Date: 12.09.2022

Indication: LCH, post chemotherapy (last on 08.08.2022), for response evaluation.

Procedure: PET-CT acquisition was done 60 minutes after injection of 10 mCi ^{18}F-FDG by intravenous route, from the level of orbits to mid-thigh. CT was done for attenuation correction and anatomical localization.

PET-CT Findings:

Head and Neck: *Multiple subcentimetric mildly FDG avid lymph nodes noted in bilateral II cervical regions - likely infective.* Visualized paranasal sinuses, skull base, pharynx, larynx and thyroid do not show any abnormality on CT.

Thorax: Physiological FDG uptake is seen in the myocardium. Lungs, large airways, pleura, heart, great vessels and other mediastinal structures appear normal on CT.

Abdomen-Pelvis: *Hepatomegaly noted (CC ~ 10.5 cm).* Normal FDG distribution is noted in the liver, spleen, kidneys, gastrointestinal tract and urinary bladder. Biliary ducts, gall bladder, spleen, kidneys, stomach, adrenals, pancreas, retroperitoneum, bowel and urinary bladder appear normal on CT. No ascites is noted.

Musculo-Skeletal System: **Lytic sclerotic lesion with mild FDG uptake noted in left proximal femur.** *Lytic sclerotic lesions with no significant FDG uptake noted in bilateral parietal bones and left tibia. D6 vertebral collapse noted.*

IMPRESSION:

- **Mildly metabolically active lytic sclerotic lesion in left proximal femur-?minimal residual disease.**
- **As compared to previous PET CT study (FDG/27787/22, dated 30.05.2022), there is no significant interval change in the scan findings.**

Dr. Sneha Prakash
Senior Resident

Dr Kh. Bangkim Chandra
Consultant

Patient copy

ALL INDIA INSTITUTE OF MEDICAL SCIENCES

Department of Pediatrics
PEDIATRICS UNIT III DISCHARGE SUMMARY

NAME: DIVYANSH	**AGE: 2.5 years**	**SEX: male**	**Bed No : AB6/33**
UHID – 105589851	**Date Of Admission: 13/4/2022**	**Date of discharge:18/4/2022**	
DIAGNOSIS: Multisystem Langerhan cell Histiocytosis/Post chemo Febrile seizure			
Consultants In charge: Dr. S K Kabra,Dr Rachna Seth.,Dr.Kana Ram Jat,Dr.Jagdish P Meena,Dr.Aditya			

HISTORY AT ADMISSION: K/C/O Multisystem Langerhan cell Histiocytosis (Liver,Bone marrow,Bone),Post 12 week Vinblastine,Prednisolone ,progression in non risk organs (new bony lesions in xiphisternum,clavicle), Ara C,Vincristine,Prednisolone protocol since 3/3/2022,last chemo on 13/4/22 (Ara c) , developed high grade fever spikes- 2 episodes and one episode of seizure associated with uprolling of eyeballs,tonic clonic movements of all limbs.

No h/o difficulty breathing/cough/coryza
No h/o loose stools/malena/decreased urine output
No H/o excessive irritability/ headache.weakness,altered sensorium,blurring of vision

Past History :

Child had fever 2 months back,not relieved on medication,on further evealuation had anaemia and peripheral smear showed 17% blasts, bone marrow was done subsequently which showed 78% blasts and was started on induction therapy, dose of which was 50% reduced i/v/o severe malnutrition and downs. Anaemia and thrombocytopenia managed symptomatically with PRBC and RDP transfusions.

Immunisation h/o : Immunised till 9months of age as per NIS.No card available

Family H/o : No h/o similar complaints in family members. No h/o malignancy/Koch contact in family members.

Developmental h/o : Age appropriate milestones achieved . No regression of milestones.

O/E in ward: Conscious, Temp :103F, HR- 162/min, RR-62/min, SpO2-99% under RA, NIBP-98/66 mmHg

No pallor/ Icterus/significant LAP/Cyanosis .No rash/No oral ulcers

CNS-conscious, oriented to time, place and person, pupils bilaterally NSNR, no e/o cranial nerve palsy, sensory examination normal, tone and power normal, DTR elicitable, plantars flexor, no meningeal or cerebellar signs.

Chest- no s/o distress, bilaterally symmetrical, air entry equal, no added sounds.

CVS- precordium normal, S1 S2 normal, No S3/murmur.

P/A- non distended, non tender, no organomegaly, free fluid absent, BS+

Weight: 10 kg W/A : 0.37 SD

Height : 72cm H/A : -1.9 SD

BMI : 19.2 BMI/A :2.04 SD

COURSE IN WARD:

Child was admitted i/v/o fever and seizure episode post chemo. Child was started on Ceftriaxone, Vancomycin and Levitiracetam. CSF examination was done which was not s/o infectious etiology. Child was monitored closely, no fever or seizure episodes after admission. Seizure episode was attributed to febrile seizure.

INVESTIGATIONS:
HEMOGRAM

Date	Hb (gm/dl)	PCV (%)	TLC ×1000	DLC (%) (N/L/M/E)	Platelets ×1000
13/4	9.8	35	5400	53/35	2.35L
14/4	8.1	30	4170	59/32	4.38L

BIOCHEMISTRY –

Date	Blood urea(mg/dl)	S. creat(mg/dl)	Uric acid(mg/dl)	Na (mEq/L)	K	Ca	PO4
13/4/22	32	0.2	4.5	132	5.1	9.7	5.8
Date	Total protein(g/dl)	Albumin(g/dl)	Total bilirubin(mg/dl)	Direct bilirubin(mg/dl)	AST(IU/L)	ALT	ALP
13/4/22	7.3	4.6	0.5	0.2	64	95	206

OTHERS

14/4/22	CSF	Glucose :57(99) Protein :12 TLC/DLC/RBC : Nil

CONDITION AT DISCHARGE:

Conscious, Temp :Afebrile, HR- 162/min, RR-62/min, SpO2-99% under RA, NIBP-98/66 mmHg
No pallor/ Icterus/significant LAP/Cyanosis .No rash/No oral ulcers

CNS-conscious, oriented to time, place and person, pupils bilaterally NSNR, no e/o cranial nerve palsy, sensory examination normal, tone and power normal, DTR elicitable, plantars flexor, no meningeal or cerebellar signs.

Chest- no s/o distress, bilaterally symmetrical, air entry equal, no added sounds.

CVS- precordium normal, S1 S2 normal, No S3/murmur.

P/A- non distended, non tender, no organomegaly, free fluid absent, BS+

Weight: 10 kg W/A : 0.37 SD

Height : 72cm H/A : -1.9 SD

BMI : 19.2 BMI/A :2.04 SD

TREATMENT GIVEN :

Inj Ceftriaxone
Inj Vancomycin
Inj Levitiracetam
Lanzol JR

Advise at discharge :

1. Syp Septran 5ml=40mg 6ml alternate day.
2. Syp Prednisolone 2 ml OD till 26th April and then stop
3. Betadine gargles and Sitz bath TDS
4. Tab Clobazam 5mg ½ Tab TDS X 3days during episode of fever(febrile seizures prophylaxis)
5. To come to C5 daycare for chemotherapy Ara C and VCR on 4th may 2022
6. To review in paeds onco OPD on 20th April 2022
7. Peds onco helpline number +91 98105 90067
8. Midaz nasal spray 2 puff in each nostril SOS as explained. → Midaclip nasal spray
9. Danger signs explained, to report to emergency
10. OPD appointment on 20/4/22 with CBC,LFT,RFT.

SR
Dr Debabrata /Dr Himani

JR
Dr Karthik