Table 1 Clinical, radiologic, and treatment characteristics of all 13 Langerhans Cell Histiocytosis (LCH) cases

Case	Age (year) and Sex	Clinical features	Site	Laterality	Maximum dimension in (cm)	Differential diagnosis	Time for diagnosis	Baseline staging workup (systemic assessment, bone marrow, imaging modality used for staging).	Classification category and focality	Treatment	Follow up and outcome
1	4 Female	Head injury and fever	Frontal bone	Left	2.9	?Tuberculosis ? LCH,	1 month	Bone marrow examination: Not involved by LCH Imaging modality used- CT scan - Lytic lesion in left frontal bone Systemic assessment- Liver, spleen - unremarkable	Single-system Unifocal	Limited curettage with intralesional steroid infiltration (As lesion size is between 2-5 cm)	Alive and in remission at 6 years follow up
2	29 Male	Fever cough and breathlessness	Mediastinal Mass with mediastinal lymph nodes	Anterior	5	?Non Hodgkin Lymphoma, ?Thymoma, ?Germ cell tumor	3 months	Bone marrow examination- Not involved by LCH Imaging modality used- PET CT- Mediastinal lymph nodal mass Systemic assessment-Liver spleen - unremarkable	Single-system Multifocal	Systemic Chemotherapy (Injection Cytarabine 100 mg/m2 iv daily for five days repeated monthly for 12 months	Alive and in remission at 5 years follow up

3	1.2 Female	Bone pain	Lower end of femur	Right	2.5	? LCH ? Tuberculosis	1.5 months	Bone marrow examination- Not involved by LCH Imaging modality used- CT scan- Lytic lesion in right femur Systemic assessment-Liver spleen - unremarkable	Single-system Unifocal	Limited curettage with intralesional steroid infiltration	Alive and in remission at 4 years follow up
4	49 Female	Mass in buccal mucosa and enlarged bilateral cervical node. Teeth loss	Bilateral Buccal mucosa and right side mandible	Bilateral	2	? Carcinoma buccal mucosa with mandibular involvement and lymph node metastasis	2.5 months	Bone marrow examination- Not involved by LCH Imaging modality used - FDG-PET scan- Lytic lesion in mandible Systemic assessment- liver spleen unremarkable	Multisystem without risk organ involvement Multifocal	Systemic Chemotherapy (Injection Cytarabine 100 mg/m2 iv daily for five days repeated monthly for 12 months. Tab. Prednisolone Induction- 40mg/m2 daily orally for 6 weeks Continuation- 40 mg/m2 for day 1 to day 5 orally every three weeks for 12 months.	Alive and in remission at 3 years follow up
5	12 Male	Bone pain	Parietal, paramedial bone posterior to coronal bone	Left	3	? Tuberculosis ?LCH	1 month	Bone marrow examination- Not involved by LCH	Single-system Unifocal	Limited curettage with intralesional	Alive and in remission at 3 years follow up

								Imaging modality used- MRI- Lytic lesion in parietal bone Systemic assessment- liver, spleen normal		steroid infiltration (As lesion size is between 2-5 cm)	
6	16 Male	Bone pain	Cuboidal bone	Left	1	Benign bone tumor	0.5 months	Bone marrow examination-Not involved by LCH Imaging modality used -MRI -Lytic lesion in cuboidal bone Systemic assessment-liver, spleen normal	Single-system Unifocal	Surgical Excision as lesion less than 2cm	Alive and in remission at 5 years follow up
7	2 Male	Bone pain, fever and weight loss	Multifocal bone involvement with lymph nodes and liver	Bilateral	4.4	Not available	2.5 months	Bone marrow examination-Involved Imaging modality used FDG PET CT- Destructive lytic lesions involving bilateral maxillary (largest in left maxillary sinus measuring 4.4cm and sphenoid sinus. destructive lytic lesions involving entire mandible largest in right mandible measuring 4.1 cm	Multisystem with risk organ involvement Multifocal	Systemic chemotherapy Induction-Injection Vinblastine 6 mg/m2 iv weekly for 6 weeks. Tab. Prednisolone 40 mg/m2 orally for four weeks followed by tapering over 2 weeks Continuation phase-Vinblastine +	Death due to disease (LCH) progression at 3 years follow up

								. Lytic lesion in right distal humerus, proximal ulna, bilateral femori and tibia. Hypermetabolic lesion in left preauricular, zygomatic and temporal region and cervical lymph nodes. Systemic assessment- USG abdomen- Hepatomegaly with coarse and heterogenous echotexture. Spleen was unremarkable.		prednisolone + 6 mercaptopurine for 12 months. Second line therapy (V-P regime along with methotrexate was used.	
8	2 Male	Fever, weight loss	Bilateral cervical lymph nodes with hepatosplenomegaly, bone and lung lesions	Bilateral	2.5	?Tuberculosis	2 months	Bone marrow examination: Involved What was Imaging modality used: PET CT- Lytic bone lesions Systemic assessment- Hepatosplenomegaly, and lung lesions	Multisystem pulmonary with risk organ involvement Multifocal	Systemic chemotherapy Induction- Injection Vinblastine 6 mg/m2 iv weekly for 6 weeks. Tab. Prednisolone 40 mg/m2 orally for four weeks followed by tapering over 2 weeks	Death due to disease (LCH) progression at 1 year follow up

										Continuation phase- Vinblastine + prednisolone + 6 mercaptopurine for 12 months	
9	5 Male	Fever and enlarged cervical lymph nodes	Cervical lymph node	Left	2	?Lymphoma ?Tuberculosis	1.5 months	Bone marrow examination- Not involved by LCH Imaging modality used- MRI- Cervical lymph node enlargement Systemic assessment- USG -liver, spleen- unremarkable	Single- -system Unifocal	Excision of the lymph node	Alive and in remission at 3 years follow up
10	0.92 Male	Fever with Scalp lesion	Scalp	Left	1.5	? LCH ? Hemangioma	1 month	Bone marrow examination-Not involved by LCH Imaging modality used- CT scan- Lytic lesion in parietotemporal bone Systemic assessment- liver, spleen- unremarkable	Single -system Unifocal	Surgical Excision as lesion less than 2cm	Death due to cause unrelated to disease at 5 years follow up (Covid).

11	1 Male	Swelling in the left temporal region	Left temporal region extending into retroorbital intracranial region	Bilateral	1.9	? LCH ? Tuberculosis	2.5 months	Bone marrow examination-Not involved by LCH Imaging modality used: PET CT-lytic lesion in left orbit eroding left sphenoid bone extending to infratemporal fossa. Mild intracranial extension. Lytic lesion in bilateral frontal bones. Likely calvarial metastasis. Systemic assessment-liver, spleen unremarkable Neuroimaging with MRI brain was performed which did not reveal any pituitary-hypothalamus abnormality. Endocrine assessment was performed to rule out pituitary dysfunction and diabetes insipidus like Serum cortisol, ACTH, TSH, FT4, serum electrolytes, urine	Multisystem - CNS without risk organ involvemenet Multifocal	Systemic chemotherapy Induction-Injection Vinblastine 6 mg/m2 iv weekly for 6 weeks. Tab. Prednisolone 40 mg/m2 orally for four weeks followed by tapering over 2 weeks Continuation phase-Vinblastine + prednisolone + 6 mercaptopurine for 12 months	Alive and in remission at 3 years follow up

								specific gravity and osmolality etc. and were within normal limits). Neurocognitive assessment Developmental milestones were appropriate for age			
12	55 Male	Pain and swelling in both sided submandibular region	Submandibular region	Bilateral	1.5	?Tuberculosis ?Lymphoma	2.8 months	Bone marrow examination- Not involved by LCH Imaging modality used : CT scan and USG Neck - showed enlarged bilateral cervical lymph nodes Systemic assessment-liver, spleen- unremarkable	Single- system multifocal	Systemic Chemotherapy (Injection Cytarabine 100 mg/m2 iv daily for five days repeated monthly for 12 months Radiotherapy (10Gy) (The decision to administer radiotherapy was made in a multidisciplinary meeting because imaging showed facial nerve involvement)	Alive and in remission at 6 years follow up

13	15 Male	Pain	Left iliac bone and right femur	Bilateral	2.5	? Polyostotic fibrous dysplasia ? LCH ? Tuberculosis ? No Hodgkin Lymphoma	1 month	**Bone marrow examination-** Not involved by LCH **Imaging modality used-** PET CT - metabolically active lytic lesion is noted involving left iliac bone and head and neck region of right femur Systemic assessment-liver, spleen- unremarkable Bone scintigraphy - Diffuse increased tracer uptake involving head, neck and trochanteric region of right femur	Single-system multifocal	Systemic chemotherapy Induction- Injection Vinblastine 6 mg/m2 iv weekly for 6 weeks. Tab. Prednisolone 40 mg/m^2 orally for four weeks followed by tapering over 2 weeks Continuation phase- Vinblastine + prednisolone for 12 months	Alive and in remission at 1 year follow up

Glossary of terms: LCH- Langerhans Cell Histiocytosis, CNS- Central Nervous System, CT scan - Computed Tomography scan, MRI- Magnetic resonance imaging, FDG PET- Fluorodeoxyglucose Positron Emission Tomography, PET CT- Positron Emission Tomography/Computed Tomography, USG- Ultrasonography, iv- intravenous