

LUMPS AND BUMPS: WHEN TO INVESTIGATE

INTRODUCTION

Any enlargement of Lymph nodes/glands are called Lymphadenopathy.

Lymphatic system including Lymph nodes are a part of immune system.

Lymphadenopathy usually occurs due to an immune response to infections or due to the infiltration of abnormal cells within the nodes.

SIGNIFICANT LYMPHADENOPATHY

Cervical LN, Axillary LN > 1 cm

Inguinal LN > 1.5 cm

Epitrochlear LN, Supraclavicular LN: any size

Differential diagnosis depending on Duration of lymphadenopathy

Acute- infections

Streptococcus, staphylococcus (suppurative), viruses (EBV, Adeno), anaerobic (dental)

Subacute - infections, autoimmune, malignancy

Streptococcus, TB, EBV, lice, dandruff, Leukemia, Non Hodgkins Lymphoma, Neuroblastoma, lupus

Chronic- infection, malignancy, immunodeficiency

TB, HIV, Hodgkins lymphoma, Leukemia, Lymphoproliferation, RDD, Thyroid cancer

Approach to Lymphadenopathy-What not to miss while taking history

H/O throat pain, recurrent sore throat, mouth breathing, noisy breathing, mouth ulcers, sinusitis

H/O dental issues, eye or ear infections

H/O head lice or dandruff

H/o contact with pets (cats)- cat scratch disease (bartonella)
H/O walking bare foot

H/o Vaccination- BCG/MMR

H/o Drugs- Anticonvulsants, cyclosporine, antibiotics

Recurrent and severe infections suggestive of immunodeficiency/HIV

Constitutional symptoms - fever, pallor, bleeding, bony pain, weight loss, breathing difficulty/ stridor and night sweats

PHYSICAL EXAMINATION

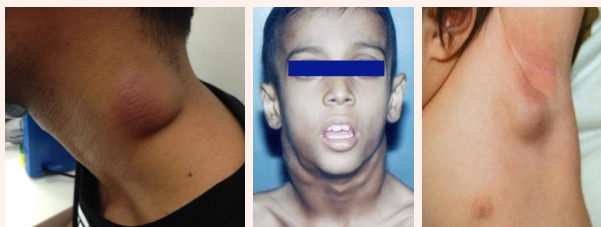
Vitals: check for hemodynamic instability

Lymph node examination: size, consistency, tenderness, fixation to skin or deeper structures, erythema / sinus of overlying skin.

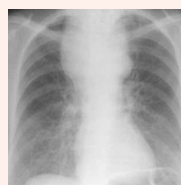
General physical examination: look for pallor, skin rash, petechiae, ecchymosis, tonsillitis, otitis media, dental infection.

Abdomen: Hepatosplenomegaly

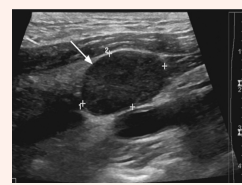
CLINICAL PICTURES



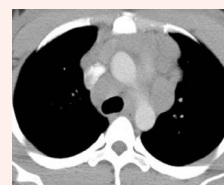
Chest X ray showing Hilar and Mediastinal LN



Chest X ray showing mediastinal LN



USG showing enlarged axillary LN with loss of fatty hilum

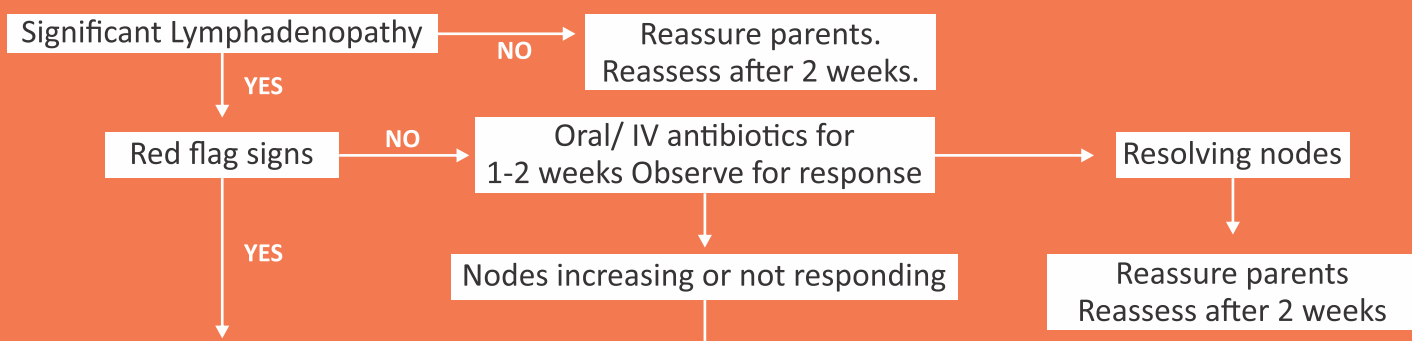


CECT chest showing mediastinal LN

RED FLAGS : CONSIDER EARLY REFERRAL

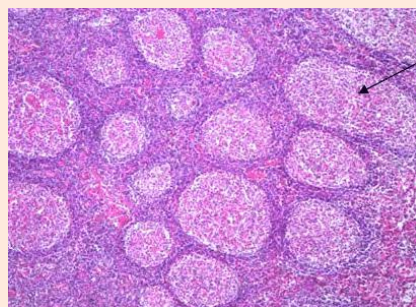
- ◆ Associated with systemic symptoms (weight loss, petechiae, pallor, night sweats, dyspnoea or organomegaly).
- ◆ Inadequate response to 1-2 weeks of antibiotics.
- ◆ Persistent/ progressive lymphadenopathy which are hard/ matted/ non-tender.

APPROACH TO LYMPHADENOPATHY IN CHILDREN

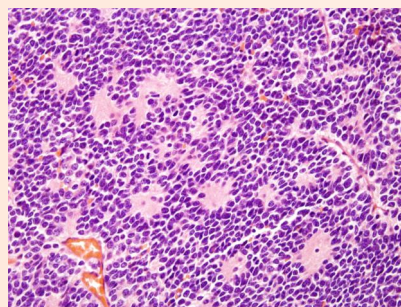


INVESTIGATE/ CONSIDER URGENT REFERRAL FOR WORKUP

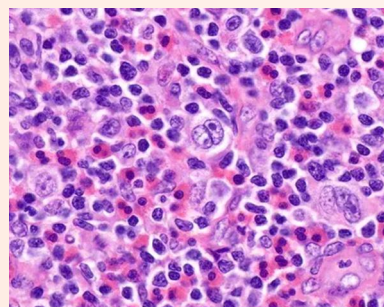
	INFECTIONS	INFLAMMATORY	MALIGNANCY	RHEUMATOLOGY	IMMUNODEFICIENCY
DIFFERENTIALS	<ul style="list-style-type: none"> ◆ Viral: EBV, HIV, CMV ◆ Bacteria: TB, Brucella, Rickettsia ◆ Others: Toxoplasma 	<ul style="list-style-type: none"> ◆ Rosai Dorfman Syndrome ◆ Kikuchi Fujimoto disease ◆ Kawasaki disease, HLH 	<ul style="list-style-type: none"> ◆ Haematology: Leukaemia, Lymphoma, LCH ◆ Solid Tumours: Sarcoma, Neuroblastoma, Thyroid Ca, Nasopharyngeal Ca 	<ul style="list-style-type: none"> ◆ SoJIA ◆ SLE 	<ul style="list-style-type: none"> ◆ ALPS ◆ Chronic Granulomatous Disease ◆ HIV
INVESTIGATIONS	<ul style="list-style-type: none"> ◆ CBC, CRP, ESR, Procalcitonin ◆ Urine cultures, LN biopsy ◆ Chest X ray, USG abdomen ◆ Blood cultures, CSF analysis 	<ul style="list-style-type: none"> ◆ CBC, CRP, ESR, Ferritin ◆ Urine routine ◆ Fibrinogen, Triglycerides 	<ul style="list-style-type: none"> ◆ CBC, Peripheral smear, PT/ APTT ◆ Uric acid, LDH, ferritin ◆ Chest X ray, USG abdomen ◆ LN biopsy 	<ul style="list-style-type: none"> ◆ ANA Profile, RA factor, ASLO ◆ C3/ C4 levels ◆ CRP, ESR, Ferritin ◆ Urine routine 	<ul style="list-style-type: none"> ◆ Immunoglobulin profile ◆ Flow cytometry for DNT cells and Lymphocyte Subset Analysis ◆ NBT/ DHR tests



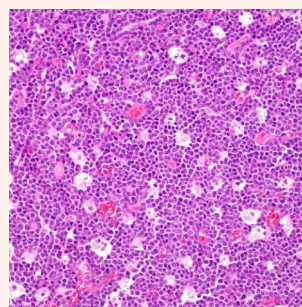
REACTIVE LYMPHADENITIS SHOWING FOLLICULAR HYPERPLASIA



NEUROBLASTOMA METASTASIS TO LN SHOWING MALIGNANT ROUND CELLS FORMING NESTS/CLUSTERS



REED STERNBERG CELLS IN CLASSICAL HODGKIN LYMPHOMA



STARRY SKY APPEARANCE IN BURKITT LYMPHOMA

DO'S AND DONT'S

- ◆ DO Consider getting LN excision biopsy/ Trucut biopsy whereas FNAC is not recommended.
- ◆ DO NOT administer STEROIDS without confirmed diagnosis.
- ◆ DO Consider sending the biopsy samples for following tests as indicated:
 - ◆ STAINING: gram stain/ AFB stain/ Fungal stain
 - ◆ CULTURES: Aerobic, TB and fungal cultures, CBNAAT/GeneXpert
 - ◆ Histopathology + Immunohistochemistry (HPE+ IHC)

CONCLUSIONS

- ◆ Lymphadenopathy in children is common AND aetiology ranging from benign causes to malignancy.
- ◆ A systematic approach that includes detailed history, physical examination, and targeted investigations is crucial
- ◆ Prompt and appropriate intervention, along with Early referral is essential for optimal outcomes in children with lymphadenopathy



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