

Alarming signs; Pediatric Lymphadenopathy Is Not Always Benign

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Background

Assessment of lymphadenopathy in children represents a diagnostic challenge because of the extensive differential diagnoses including reactive and malignant conditions.

Objective

To identify different etiologies of lymphadenopathy in children, and assess parameters commonly associated with malignancy and the role of the diagnostic work up.

DESIGN

Four hundred fifty three patients aged 2-16 years (median 6 years), 58% were males. Study duration was 2 years; from 2018-2020. They were sorted into neoplastic and non-neoplastic. Acute Bacterial related lymphadenopathy (LNs) were excluded (n=236). 217 were enrolled; referred to general pediatrics clinic (n=117) only 1.9 % were malignant; while of those referred to pediatric oncology clinic (n=110, 20%) the following diagnosis were reported; leukemia (n=8), lymphoma (n=6), HLH (n=2), collagen (n=3), COVID (n=1), ALPS(n=2).

Materials & Methods

Included patients were subjected to detailed history, clinical examination stress on lymph node, site and size, organomegaly. Laboratory investigations according to each case; CBC, ESR, EBV and CMV serology. Imaging modalities, lymph node biopsy when indicated.

Results

Viral infection was the commonest; 60% were EBV, 20% CMV infection. In only 56 patients, biopsy, whether fine needle aspiration cytology, core needle or excision biopsy, was essential to reach the diagnosis Affected children were most commonly younger than eight years. Boys were more affected. No difference in frequency of the following symptoms; high temperature, sore throat, dyspnea, and respiratory symptomatology between examined children in both conditions, with differences in gastrointestinal symptoms, eyelid swelling, skin rash and fatigue.

Result

Odds ratio (4.5) for Risk for being leukemia (associated Fever > 1 week. Purpura, bone aches, LNs). Generalized, Non regressive, firm and non-tender was more risk for non-infectious (Odds ratio 3.2). Most reported investigations were CBC (100%), EB, CMV IgM (66%), ESR(50%), followed by the imaging modalities

Conclusion

EBV infection was the commonest viral infection; leukemia was rare. Alarming signs were bone aches with non-regressive course of the disease. Malignancy suspected in the following conditions: generalized LN, > 2 cm, blast cells, elevated LDH level. In such cases, LN biopsy is recommended.

