



Children's Health Ireland

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Cervical Lymphadenopathy: Initial Management in an Acute Paediatric Setting (ED or Urgent Care)

[Link to Lymphadenopathy Algorithm](#)

Aim

1. To offer evidence based guidance for management of children presenting with acute cervical lymphadenopathy
2. To indicate where investigations are needed, if any, and inform which children need onward referral.

Background

Cervical lymphadenopathy is the most frequent cause of neck lumps in children. Adenopathy is usually agreed to refer to a node >1cm in diameter.

Enlarged lymph nodes are common with viral infections. Such 'reactive' lymph nodes are usually small, firm and non-tender. They may persist for weeks to months and do not require investigation.ⁱⁱ Most cervical lymphadenopathy in otherwise healthy children is due to infection and malignancy is rareⁱⁱⁱ.

Target Patient Population

This evidence summary applies to evaluating children in acute paediatric services- ED or Urgent Care- with cervical lymphadenopathy.

Target Users

This guide is directed at healthcare professionals involved engaged in evaluating children in acute paediatric services - ED or Urgent care - with cervical lymphadenopathy. This guideline may also be of use in a general paediatric outpatient setting.

Assessment

Take a history and perform a full exam.

Note especially the following:

- Duration: acute <2 weeks, persistent >2 weeks (see flowchart for next steps)
- Size of nodes
- Physical exam findings such as tachypnea, pallor, petechiae, hepatomegaly and splenomegaly.
- History of lethargy or weight loss
- Associated systemic signs, fever, overlying erythema/ cellulitis, dental signs

Initial Acute (<2 weeks)

- Most likely reactive, secondary to viral illness
- Local inflammation – e.g. eczema

Ongoing/ Persistent (>2 wks) Cervical Lymphadenopathy^{iv}:

- Consider Infection e.g. EBV, CMV (associated with generalised lymphadenopathy and hepatosplenomegaly with often a sub-acute course)
- Less common infective causes:
 - TB, HIV, Toxoplasmosis, mycobacterium avium.
- Malignancy
 - Lymphoma - Hodgkin, Non-Hodgkin
 - Leukaemia

Red Flags

- Size **greater than 2 cm**
- Size ≤2 cm with inflammatory signs and no improvement with appropriate antibiotics
- **Hard, firm, or matted** consistency of an enlarged lymph node
- Lack of associated infectious symptoms
- **Supraclavicular fossa** location
- Lack of improvement over a 4-week period
- Accompanying constitutional symptoms *as previously listed*.
- Fluctuance may indicate abscess formation

The above features warrant further investigation even in the acute setting.^v

Management (See Flowchart)

Investigations

No further investigations indicated in:

- Acute <2 weeks duration in well appearing children
- Acute lymphadenitis: Blood tests usually not necessary

If fluctuating in size or small nodes: Reasonable to discharge, advise to return if no regression at 5 days or persistence over 2 weeks.

If larger or non-varying in size or **red flags** (listed above) in exam or history further investigations are warranted to include, bloods + imaging as follows:

<p>First line:</p> <ul style="list-style-type: none"> • FBC • LFTs • CRP • Serology for EBV and CMV • Blood cultures (if febrile or suspected sepsis/abscess/cellulitis) 	<p>Second line:</p> <p>In addition to first line bloods as directed by consultant</p> <ul style="list-style-type: none"> • LDH • Extended serology testing
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Imaging

- I. **Ultrasound:** Consider US for red flags, fluctuant node or if indeterminate nodes on clinical exam. Discuss with senior prior to booking ultrasound - early outpatient follow up may be indicated.
- II. **CXR:** In setting of referral for admission or outpatient review- consider if differential includes malignancy or TB.
If enlarged hilar nodes/suggestive of mycobacterium infection → urgent discussion with respiratory medicine or ID (as per local guidance/policy) for admission and further management

Consider referral to local paediatric team when:

- Presence of **red flags** or concern regarding underlying pathology.
- If ultrasound shows inconclusive features or suspicious for malignancy, biopsy can be deemed necessary on clinical grounds- referral to oncology.
- If **any** of below features present refer to ENT for biopsy:
 - i. $\geq 2\text{cm}$
 - ii. History of malignancy or inherent increased risk eg. DiGeorge syndrome
 - iii. Supraclavicular nodes ($>0.5\text{cm}$) (60% of SC nodes are malignant)

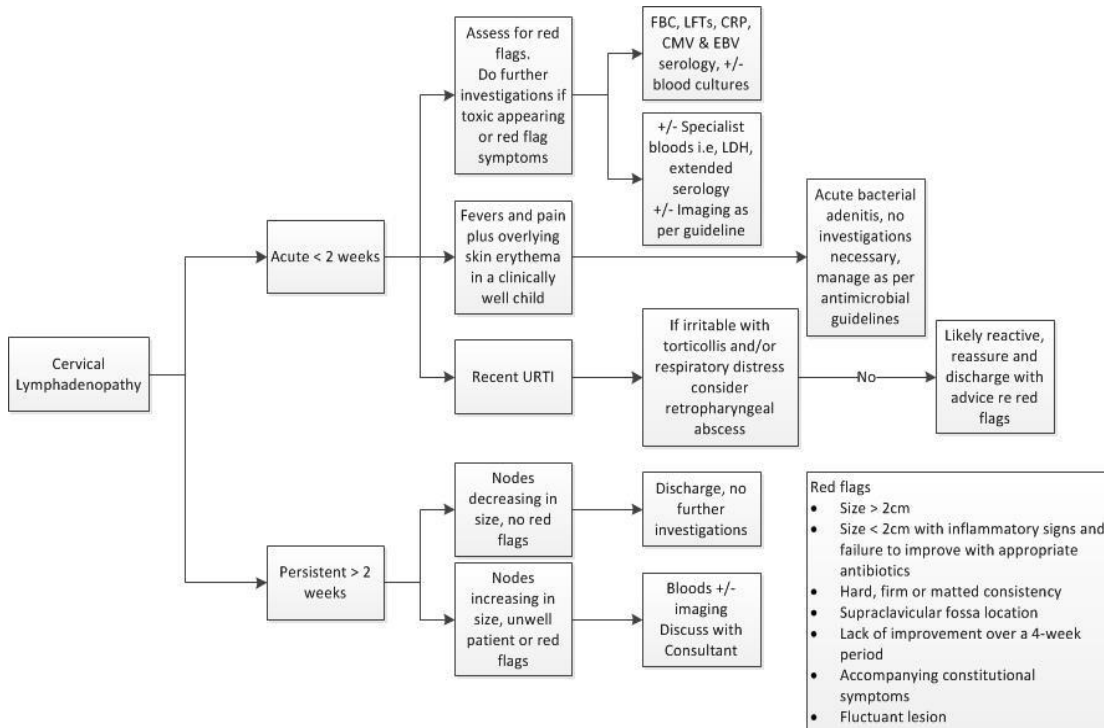
Consider ENT referral when:

Abscess formation is suspected as identified by findings of a fluctuant node.

Treatment: Acute Adenitis

Please refer to CHI antibiotic guidance for cervical lymphadenitis:

http://olchcnet.hse.ie/CHI_at_Crumlin_Clinical_Guidelines/Clinical_Guidelines/Antimicrobial_Guidelines_2019.pdf



References

- ⁱ G. Niezielska, M. Kotowski, A. Niedzielski, E. Dybiec, P.P. Wieczorek Cervical lymphadenopathy in children—incidence and diagnostic management *Int. J. Paediatric Otorhinolaryngology.*, 71 (2007), pp. 51-56
- ⁱⁱ RCH CL Guideline Accessed on 9th May 2019
https://www.rch.org.au/clinicalguide/guideline_index/Cervical_lymphadenopathy/
- ⁱⁱⁱ Locke, MacGregor et al 'The validation of an algorithm for the management of paediatric cervical lymphadenopathy' *International Journal of Pediatric Otorhinolaryngology Volume 81*, February 2016, Pages 5-9
- ^{iv} Geddes, G et al, 2013, 'Pediatric neck masses'. *Pediatr Rev.* 2013 Mar;34(3):115-24; quiz 125. doi: 10.1542/pir.34-3-115.
- ^v Friedmann, Alison Evaluation and Management of Lymphadenopathy in Children *Pediatrics in Review* 2008;29;53