**Appropriateness of ultrasound scan requests for paediatric cervical lymphadenopathy**

**Descriptor:**

An audit of the appropriateness of ultrasound scan (USS) requests investigating neck lumps/suspected lymph nodes in the paediatric population.

**Background:**

Cervical lymphadenopathy is common in the paediatric population. Up to 45% of otherwise healthy children are estimated to have palpable lymphadenopathy1 and as many as 90% of children between 4 to 8 years old. 2 Infection is the most common cause, but malignancy the most important to exclude. Neck USS is not associated with radiation exposure and is an appropriate first line investigation if further evaluation is required.3

Outside of reference to “unexplained” and “generalised” lymphadenopathy in the NICE guidelines for suspected cancer (consideration of “very urgent referral for specialist assessment” recommended)4 there is no wider national guidance on cervical lymphadenopathy in children, when to reassure, and when to investigate. Local guidelines are often in place.

Although ultrasound is safer and less costly than other imaging modalities, demands on the service continue to increase. Diagnostic ultrasonography was the second most common imaging test in England in 2018/2019, only behind plain radiographs5. It is important for clinicians to be judicious in their requests, to reduce unnecessary investigations.

The use of guidelines has been shown to improve appropriateness of imaging, reducing numbers of examinations by up to 30%.6,7

## The Cycle

**The standard:**

Ensure there is a locally agreed guideline for when paediatric lymph nodes should be scanned

Example indications could include:

- Enlarged lymph nodes (> 1cm) and/or abnormal features (e.g. firm, matted)

- Supraclavicular lymph nodes

- Suspected lymphadenitis/collection

- Red flag symptoms (weight loss, night sweats, hepatosplenomegaly, anaemia, abnormal bleeding/bruising, generalised lymphadenopathy)

Imaging requests should clearly state the (locally accepted) indication(s) for USS

**Target:**

Local guideline - 100%

Compliance with local guidelines >90%  - A national audit of appropriate imaging in 2014 found that 88 – 91% of requests were appropriate.8

## Assess local practice

**Indicators:**

Percentage of neck USS requests for paediatric cervical lymphadenopathy specifying clinically suspicious features.

**Data items to be collected:**

Data items to be collected

From PACS/RIS:

- Consecutive paediatric patients who have undergone neck USS for neck lumps/suspected adenopathy.

- Exclusion criteria: midline masses/structures; specific clinical suspicion of non-lymph node aetiology/pathology

- Clinical information/question on request

- Source of referral

- Further action (further imaging/FNAC/excision biopsy) / outcome data may be useful when discussing results of audit with referrers

**Suggested number:**

Retrospective analysis of 25-30 consecutive neck ultrasound scans for adenopathy in patients aged <16.

**Suggestions for change if target not met:**

Present audit findings at local & regional meetings

Circulate local guidelines amongst all referrers including GPs, paediatrics & ENT

Vetting of requests by radiologists and sonographers in accordance to local guidelines

Re-audit

**Resources:**

see references

**References:**

1. Larsson L.O., Bentzon M.W., Berg K., et al. Palpable lymph nodes in the neck in Swedish schoolchildren. Acta Paediatr 1994; 83: 1092-1094
2. Park Y.W. Evaluation of neck masses in children. Am Fam Physician 1995; 51: 1904-1912American College of Radiology. ACR Appropriateness Criteria® Neck Mass/Adenopathy. [Online]. American College of Radiology, 2018. [Accessed 31 October 2019]. Available from: <https://acsearch.acr.org/docs/69504/Narrative/>
3. National Institute for Health and Care Excellence (NICE). Suspected cancer: recognition and referral. [NG12]. [Online]. NICE, 2015. [Accessed 31 October 2019]. Available from: <https://www.nice.org.uk/guidance/ng12/chapter/Recommendations-organised-by-symptom-and-findings-of-primary-care-investigations#symptoms-in-children-and-young-people>
4. Oakeshott P, Kerry SM, Williams JE. Randomized controlled trial of the effect of the Royal College of Radiologists’ guidelines on general practitioners’ referrals for radiographic examination. Br J Gen Pract 1994;44: 427-8
5. The Royal College of Radiologists Working Party. Influence of Royal College of Radiologists’ guidelines on referral from general practice. BMJ 1993; 306:110-1
6. NHS England and NHS Improvement. Diagnostic Imaging Dataset Statistical Release. [Online]. NHS England and NHS Improvement, 2019. [Accessed 31 October 2019]. Available from: <https://www.england.nhs.uk/statistics/wp-content/uploads/sites/2/2019/07/Provisional-Monthly-Diagnostic-Imaging-Dataset-Statistics-2019-07-18.pdf>
7. Remedios, D., Drinkwater, K., Warwick, R., & Clinical Radiology Audit Committee (CRAC), The Royal College of Radiologists, London. National audit of appropriate imaging. Clin Radiol 2014;69: 1039-1044

**Submitted by:**

Dr James Sarkodieh

**Co-authors:**

Dr Olutobi A. Meadows

Dr James E. Sarkodieh

**Published Date:**

Wednesday 17 June 2020

**Last Reviewed:**

Wednesday 17 June 2020