Case Report

Neck node in adult: a diagnostic dilemma

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ABSTRACT

A tender neck mass in adults is a common disease and can be a diagnostic challenge because of its varied presentations, that can range from reactive lymphadenopathy to malignancy. We would like to describe a case report of young male with an enlarged tender neck swelling of short duration. The diagnostic imaging findings mimicked that of scrofula, which prompted a complete workup. Since the other investigations could not prompt to a specific diagnosis, an excision biopsy was performed. The histopathology report showed reactive lymphadenitis and the patient symptomatically improved with broad spectrum antibiotics. We would like to conclude that reactive lymphadenitis can mimic many features of other important differential diagnosis of neck masses. Hence a clinician should have a wide array of suspicion before coming to the definitive diagnosis and management.

Keywords: Neck Node, Reactive lymphadenitis

INTRODUCTION

A tender neck mass in adults is a common disease and can be a diagnostic challenge because of its wide array of presentations that can range from reactive lymphadenopathy to malignancy. Generally in young patients the common causes will be congenital conditions, infectious, inflammatory diseases and trauma; where in elder patients especially more than 40 yrs, neoplasm forms an important differential diagnosis. We would like to describe a case report of young male with an enlarged tender neck swelling of short duration. The diagnostic imaging findings mimicked that of tuberculous cervical lymphadenopathy, which prompted a complete workup.

CASE REPORT

A 24 year old male Human Resource staff by occupation presented to ENT OPD with a painful swelling on the right side of neck for 3 weeks. To start with the swelling was small and it progressed gradually to the present size. There was a dull aching pain associated with the swelling. Patient also had fever since the last three days. Patient did not have any sore throat, odynophagia, shortness of breath, stridor, nasal obstruction and post nasal drip. There was no history of skin rash, axillary or inguinal lymphadenopathy. There was no history of loss of appetite, weight and evening rise in temperature. No history contact with tuberculosis. There was no history pharyngitis in recent past. There was no significant past medical history. There was no family history of haematological or head and neck malignancy.

There was no history of drug abuse, smoking and alcohol. There was no exposure to pets or other animals.

PHYSICAL EXAMINATION

Patients vitals upon arrival showed BP-120/80 mmHg, PR-90bpm and temperature of 99°F, RR of 12 cycles/min. On general examination, patient was
conscious, cooperative and well oriented to time, place
and person. On local examination, oral cavity and
oropharynx appears to be normal. There was a non
erythematous exquisitely tender mass on the right lateral
aspect of neck over anterior border of sternocleidomastoid muscle of about 4×6 cm in size. The
skin overlying the swelling was intact, not indurated,
pinchable and not associated with any dilated veins and
sinuses. The swelling was not fixed to underlying
structures, firm in consistency. No other palpable nodes
on the ipsilateral and contralateral sides of neck. No
evidence of palpable axillary and inguinal nodes.
Examination of ear, nose and throat appears to be
clinically normal.

Figure 1: Showing right sided lymphadenopathy.

LABORATORY FINDINGS

Patients complete blood counts were within normal
limits. Peripheral smear showed normocytic
normochromic blood picture. ESR was elevated to about
30mm per hour. Sputum AFB was negative and Mantoux
was non reactive. Serology for HIV and HbsAg was
negative.

DIAGNOSTIC IMAGING

Patient’s chest x-ray was unremarkable. USG neck
showed non circumscribed enlarged predominantly
hyper-echoic lesion (3.3×2.7×1.9 cm) on right side, no
internal vascularity noted. Lesion shows absence of
hilum. No evidence of matting of lymph nodes seen.

CECT of neck showed a large lymph node measuring
(4.8×4×6 cm) with central necrosis in the level III in right
side of neck. Multiple significantly enlarged cervical
lymph nodes were present, of subcentimetric size on both
right and left side. CECT features suggestive of B/L
cervical lymphadenitis, largest lymph node present in the
right side level III, likely to be of tubercular etiology.

FNAC of neck swelling was suggestive of reactive
lymphadenitis with no evidence of malignancy.

Figure 2: CECT showing multiple lymphadenopathy.

TREATMENT

Patient was treated with IV antibiotics, third generation
cephalosporins and anti-inflammatory drugs for about 7
days. Inspite of this treatment, there was no reduction in
the size of the swelling and no symptomatic
improvement. Due to diagnostic uncertainty from the
other investigations, an excision biopsy was performed.

Operative findings: On the table a transverse incision was
placed over the swelling and deepened through layers, on
dissection pus was present and aspirated. There was
evidence of periadenitis. Lymph node was excised in
toto. Pus that was aspirated was sent for culture and
sensitivity, AFB and gram staining.

Post operative period was uneventful. Patient was
discharged and out patient follow-up had been done on
Day 7 and HPE report showed predominantly
lymphocytes and scattered neutrophils. These
inflammatory cell collections are extending into the
muscle bundles; features suggestive of reactive
lymphadenitis.

Figure 3: HPE showing reactive lymphadenitis.
Patient was followed up after 1 month and at the end of second month and was found to be asymptomatic with a healthy wound.

DISCUSSION

The presentation of neck mass can be a diagnostic challenge, requiring not only a comprehensive history and physical examination but also radiological imaging, multiple laboratory studies and often cervical node biopsy. The varied spectrum of diseases a clinician should keep in mind would be ranging from congenital conditions, inflammatory, neoplastic or manifestations of systemic diseases.

Table 1: KITTENS mnemonic for the differential diagnosis of the adult neck mass.

| Category                      | Examples                                                                 |
|-------------------------------|--------------------------------------------------------------------------|
| **K** Congenital/developmental anomalies | Thyroglossal duct cyst, Brachial cleft cyst, Vascular malformation, Dermoid cyst, Lymphophangeal cyst, etc. |
| **I** Infectious/inflammatory | Lymphadenitis/cervical adenopathy, Viral (EBV), Bacterial (cat scratch disease, mycobacteria, atypical mycobacteria) |
| **T** Trauma                  | Hematoma, Pseudoaneurysm, Laryngocele                                    |
| **E** Toxic                   | Thyroid toxicosis                                                        |
| **N** Endocrine               | Thyroid neoplasms, Parathyroid neoplasms                                 |
| **S** Parapharyngeal space-salivary tumors, glomus tumors | Neoplasms, Salivary gland, Neoplastic, Parapharyngeal space-salivary tumors, glomus tumors |

In general, enlarged neck nodes other than supraclavicular/Level V nodes usually result from reactive lymphadenopathy. In our case the largest neck node was in level III; as the blood counts were within normal limits and there was no generalised lymphadenopathy, the possibility of malignancy was ruled out. Since the largest palpable node is in level III, occult primary cancer remained on the differential diagnosis because the level II–III nodes drain the various hidden areas of pharynx. In the present case FNAC and HPE suggested a benign pathology.

Figure 4: Levels of neck node with corresponding draining areas.

Tuberculous cervical lymphadenitis is perhaps the most common etiology of a neck mass and presents in young patients as large painless lymph nodes. Inspite being the most common etiology for enlarged cervical nodes, only one-third of patients have a documented history of TB. The diagnostic features of tuberculous lymphadenitis on a CT neck shows central necrosis, nodal matting and minimal periadenitis. Although in our case, CT Neck mimic features of tubercular lymphadenitis, the histopathology and culture & sensitivity both were negative for TB.

Bacterial infection causes reactive lymphadenopathy due to the stimulation of the immune system by regional infectious processes, such as upper respiratory infections, stomatitis or dental caries. The other viral etiologies for cervical lymphadenopathy include HIV, Infectious mononucleosis and CMV. In the present scenario, culture reports were sterile and no particular organism could be attributed as a cause; though the patient improved with broad spectrum antibiotic therapy.

CONCLUSION

We would like to conclude that Reactive lymphadenitis can mimic many features of other important differential diagnosis of neck masses. Hence a clinician should have a wide array of suspicion before coming to the definitive diagnosis and management.

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REFERENCES

1. Rosenberg TL, Brown JJ, Jefferson GD. Evaluating the adult patient with a neck mass. Medical Clinics. 2010;94(5):1017-29.
2. Pasha R, Golub JS, editors. Otolaryngology-Head and Neck Surgery: Clinical Reference Guide. Plural Publishing; 2017.
3. Weiss LM, O'malley D. Benign lymphadenopathies. Modern Pathol. 2013;26(S1):S88.
4. Sakai O, Curtin HD, Romo LV, Som PM. Lymph node pathology: benign proliferative, lymphoma, and metastatic disease. Radiologic Clinics. 2000;38(5):979-98.
5. Robbins KT, Medina JE, Wolfe GT, Levine PA, Sessions RB, Pruet CW. Standardizing neck dissection terminology: official report of the Academy's Committee for Head and Neck Surgery and Oncology. Arch Otolaryngol Head Neck Surg. 1991;117(6):601-5.
6. Grégoire V, Ang K, Budach W, Grau C, Hamoir M, Langendijk JA, et al. Delineation of the neck node levels for head and neck tumors: a 2013 update. DAHANCA, EORTC, HKNPCSG, NCIC CTG, NCRI, RTOG, TROG consensus guidelines. Radiotherapy and oncology. 2014;110(1):172-81.
7. Martin H. Cervical lymphnode metastasis as the first symptom of cancer. SGO. 1944;78:133-59.
8. Jeghers H, Clark SL Jr, Templeton AC. Lymphadenopathy and disorders of the lymphatics. In: Blacklow RS, ed. MacBryde’s Signs and symptoms: applied pathologic physiology and clinical interpretation. 6th ed. Philadelphia: Lippincott; 1983: 467-533.
9. Gibbs WN, Bridges DA, Opatowsky MJ. Bilateral lymphadenopathy in a young woman. InBayler University Medical Center Proceedings 2008;21(4):430-2.
10. Fontanilla JM, Barnes A, Von Rey CF. Current diagnosis and management of peripheral tuberculous lymphadenitis. Clinical Infectious Diseases. 2011;53(6):555-62.
11. Wei YF, Liaw YS, Ku SC, Chang YL, Yang PC. Clinical features and predictors of a complicated treatment course in peripheral tuberculous lymphadenitis. Journal of the Formosan Medical Association. 2008;107(3):225-31.
12. Artenstein AW, Kim JH, Williams WJ, Chung RC. Isolated peripheral tuberculous lymphadenitis in adults: current clinical and diagnostic issues. Clin Infect Dis. 1995;20(4):876-82.
13. Restrepo R, Oneto J, Lopez K, Kukreja K. Head and neck lymph nodes in children: the spectrum from normal to abnormal. Pediatric Radiol. 2009;39(8):836.
14. Meier JD, Grimmer JF. Evaluation and management of neck masses in children. Am Family Physician. 2014;89(5):353-8.

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