

CASE REPORT

Cervical Rheumatoid Nodule Mimicking a Lymph Node

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Abstract

Rheumatoid nodules are subcutaneous nodules >5mm in diameter, that occur in approximately 30 percent of patients with rheumatoid arthritis (RA). Common sites include areas of pressure or repetitive irritation such as the buttocks, sacral prominences, fingers, the extensor surfaces of the forearm or the occipital region. We herein we report a case of rheumatoid nodule occurring in the right side of the neck at anterior triangle. This occurrence has not been reported before.

Keywords: *Cervical , Rheumatoid Nodule, Saudi Arabia*

INTRODUCTION

Rheumatoid nodules are subcutaneous nodules >5mm in diameter, that occur in approximately 30 percent of patients with rheumatoid arthritis (RA). Common sites include areas of pressure or repetitive irritation such as the buttocks, sacral prominences, fingers, the extensor surfaces of the forearm or the occipital region (1) Case reports also document at unusual sites which include upper eyelid, distal region of soles, vulva and internally in the gallbladder, lung, heart valves, larynx and spine.(2) A case of rheumatoid nodule involving the buccal mucosa was also reported.(3) we herein report a case of rheumatoid nodule occurring in the right side of the neck at anterior triangle. This occurrence has not been reported before.

Case presentation

A forty seven years old female known case of Seropositive Rheumatoid Arthritis for 12 years maintained for the last 5 years on etanercept 50 mg subcutaneously once weekly , methotrexate 15 mg orally weekly, folic acid 10 mg weekly and diclofenac 50 mg twice daily as needed for pain , pantoprazole 40 mg daily . She presented with painless swelling located at right side of the neck for one week duration. She had no history of shortness of breath, chest pain, dysphagia, odynophagia, dryness of the mouth or eyes .She reported no history of skin abrasion or animal scratches and no contact with tuberculosis patients. She is a non-smoker and does not drink alcohol. Patient is a mother of four healthy children. Her disease is controlled on the above medications.

On examination she looked well. Her vital signs were: Temperature: 36.6 ° Heart Rate: 72 bpm Respiratory Rate: 18 bpm Blood Pressure: 100 / 55 mmHg SpO2: 96%. Neck examination revealed a soft right side anterior

cervical triangle swelling with a diameter of 3cm, non-tender, and not attached to skin. There was no lymphadenopathy in the cervical, axillary or inguinal areas. Lungs and skin examinations were unremarkable.

The following laboratory results were obtained : White blood cells (WBC) $6.600 \times 10^9/L$, Hemoglobin (Hgb) 116 gm/L, Platelets(PLTs) $371.0 \times 10^9/L$, ESR : 48 mm/Hr ,C-Reactive Protein (CRP) 10.400 mg/L ,Blood Urea Nitrogen (BUN) 3.6 mmol/L , phosphate 1.28 mmol/L , Calcium 2.03 mmol/L , Alanine Amino Transferase (ALT) 15 unit/L, Aspartate Amino Transferase (AST) 16 unit/L Epstein - Barr - Virus (EBV) Immunoglobulin was nonreactive. Ultrasound (US) of the area showed well-defined heterogeneous lesion with cystic changes seen in the mid right cervical region, measuring about 3.3 x 1.9 cm with peripheral increased vascularity noted (figure 1).

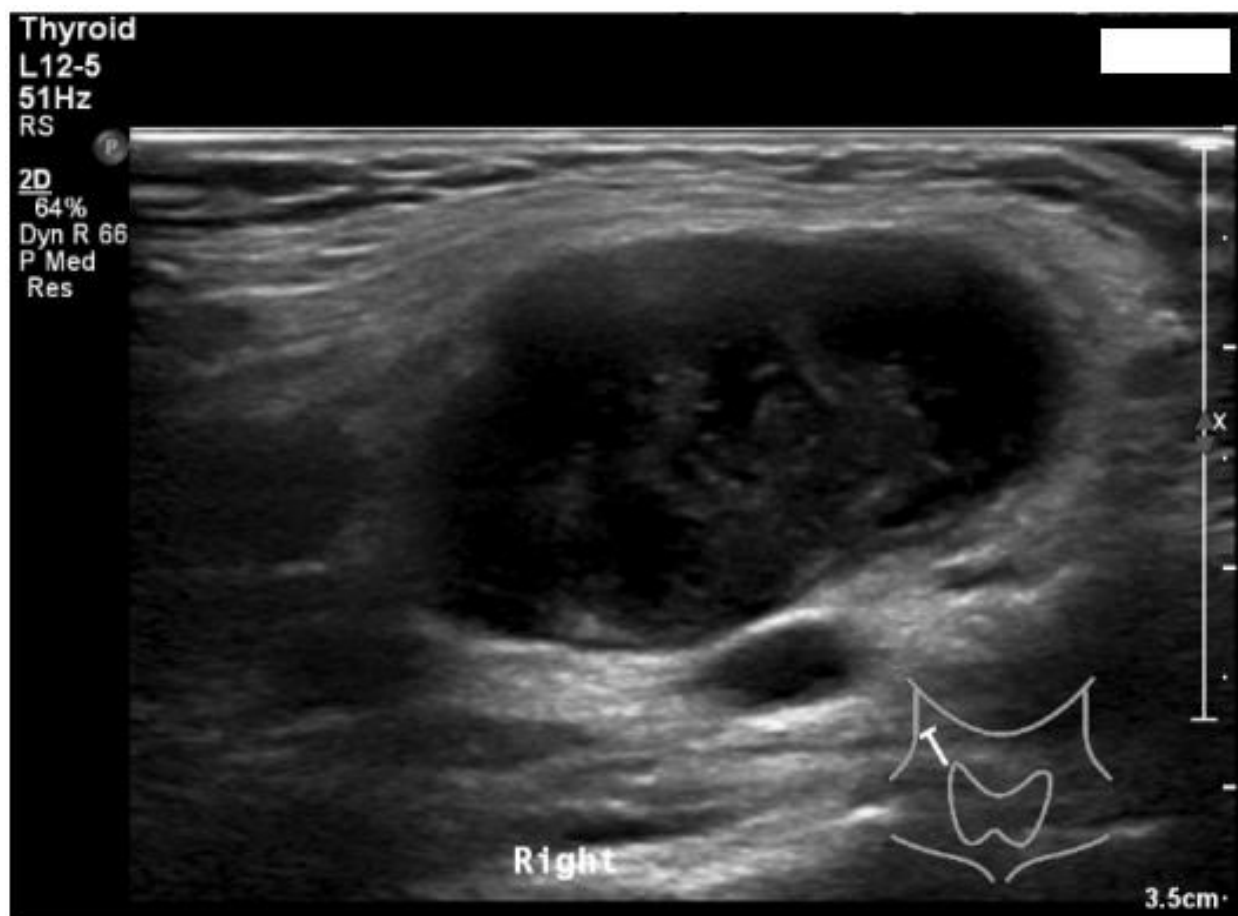


Figure 1: US of the mid right cervical region area showing well-defined heterogeneous lesion with cystic changes.

Computed tomography scan (CT) of the neck showed a multilobulated low attenuated lesion with peripheral rim and residual soft tissue enhancement seen just anterior to the right carotid space and medial to the right sternocleidomastoid,(measuring 1.5 x 2.5 cm) likely representing necrotic lymph node (figure 2).

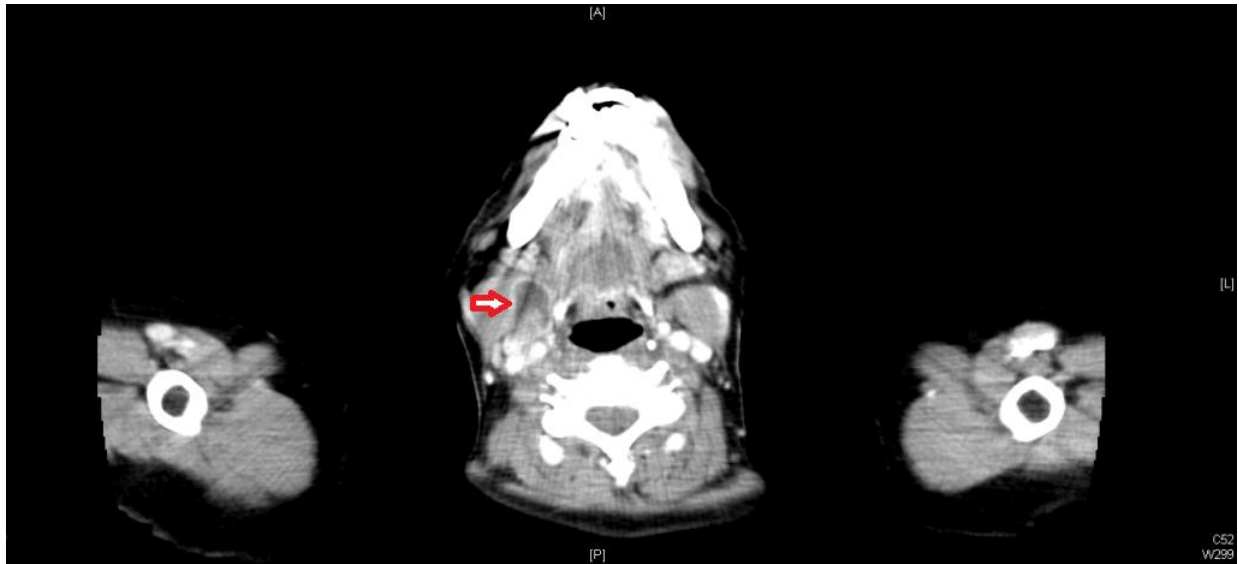


Figure 2: CT of the neck showing multilobulated low attenuated lesion seen just anterior to the right carotid space and medial to the right sternocleidomastoid likely representing necrotic lymph node.

An excisional biopsy showed a fibrotic and distorted lymph node containing palisading histiocytes which are surrounding necrotic collagen; scattered giant cells are also seen. Necrotizing and palisading histiocytic granulomas are consistent with rheumatoid nodules. There is no evidence of Tuberculosis or malignancy. Special stains for acid fast bacilli and fungi were negative.

DISCUSSION

Rheumatoid nodules occur in approximately 30 percent of patients with RA especially in the seropositive of them such as our patient. (4) They develop most commonly subcutaneously in pressure areas (e.g. elbows and finger joints) and bedridden patients may develop them on the occiput and ischial areas.(5) They may also occasionally affect internal organs including pleura, lungs, pericardium, myocardium, meninges, larynx, and in other connective tissues elsewhere in the body. However, their presence within the lateral aspect of the cervical area has never reported. Histologically, a rheumatoid nodule consists of three zones: a central necrotic area containing cellular debris, fibrin and collagen; an intermediate area comprising of palisaded macrophages; and a surrounding area of perivascular infiltration with lymphocytes, histiocytes and plasma cells.(6)(7).

The pathogenesis behind this is not clearly defined. Diagnosis of such cases is challenging especially in patients with clinical suspicion of malignancy. Our report is the first report of a case of rheumatoid nodule occurring in the right side of the neck at anterior triangle.

Our initial workup was directed toward ruling out infections and lymphomas as possible causes of such swelling .However, detailed history and examination failed to uncover any possible focus of infection and was not suggestive of lymphoproliferative illness. CT chest and abdomen showed no suspicious lesions. CT neck showed the previously mentioned multilobulated low attenuated lesion with peripheral rim and residual soft tissue enhancement seen just anterior to the right carotid space and medial to the right sternocleidomastoid (measuring 1.5 x 2.5 cm) ,likely representing necrotic lymph node (figure 2). After that, an excisional biopsy was done and it clinched the

actual disease. It showed a fibrotic and distorted lymph node containing palisading histiocytic granulomas consistent with rheumatoid nodule. There was no evidence of Tuberculosis or malignancy. After excluding infectious causes like TB and EBV infection and Malignant causes like lymphomas and based on biopsy pathology results, our final diagnosis was rheumatoid nodule and patient was discharged to be seen as outpatient.

CONCLUSION

The presence of a new neck mass should always be followed by a thorough clinical history, examination and further evaluation, including imaging and directed biopsies, to exclude the presence of a malignancy and infections especially at patients taking immune suppressants medications. However, in patients with known RA and active disease, the clinician should be aware that, although rare, rheumatoid nodules should be included as one of the differential diagnoses of neck masses.

Consent

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Competing interests

The author(s) declare that they have no competing interests.

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