Unusual Site of Metastasis of Bronchogenic Carcinoma

Pant P[1], Sedhain A[2], D'Souza S[3], Renuka BG[4]

[1]Department of Internal Medicine

Dhulikhel Hospital - Kathmandu University Hospital,

Kavre, Nepal

[2]Department of Internal Medicine

College of Medical Science,

Bharatpur, Nepal

[3,4] Department of Internal Medicine

Kasturba Medical College,

Mangalore, India

Correspondinvg Author

Dr Pankaj Pant

Department of Internal Medicine

Dhulikhel Hospital - Kathmandu University Hospital,

Kavre, Nepal

Email. drpant77@yahoo.com

ABSTRACT

Metastasis of bronchogenic carcinoma to the chest wall and axillary lymphnodes is a rare occurence. This study reports the case of a patient presenting with chest wall swelling as initial symptom which on evaluation was found to be a lymphnode metastasis. The patient also had axillary lymphnode metastasis on the same side as the chest swelling with a contralateral pleural effusion. Here, we discuss the pathways and possible mechanisms of contra lateral auxillary and chest wall lymphnode involvement without ispilateral nodal involvement in bronchogenic carcinoma.

Key Words

bronchogenic carcinoma, contralateral metastasis, axillary lymphnodes, chest wall mass

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INTRODUCTION

Bronchogenic carcinoma may be clinically dormant in many cases until the involvement of pleura or erosion of bones occurs. However, focal chest wall swelling with axillary lymp node as an initial presentiog of symptoms of bronchogenic carcinoma is quite rare. It often poses diagnostic challenges as it has to be differentiated from numerous other but equally less common conditions.[1] Contralateral axillaryelymphnode and chest wall involovement without ipsilateral nodal involvement in bronchogeniccarcinimaasdocumentedinourcaseisquite rareandthepossiblehypotheseisforsuchapresentation and their implications on treatment and prognosis are discussed.

CASE REPORT

A 58 year old man, presented ato our hospital with complaints of progressive breathlessness and swelling in the left chest and axilla. He first noticed a painless swelling three months back which had gradually increased in size. The patient also gave ae history of cough with streaky hemoptysis.

On examination, an oval swelling of 7x5cm was noted in the left anterior chest wall at the infraclavicular area overlying the second to fourth[h] ribs. A second swelling sized cm was also seen in the left axilla (Figure-1). The swellings were nontender, firm in consistency, irreducibl, with restricted mobility, no impulse on coughing, and the skin over the swelling was normal. Respiratory examination revealed that there was a stony dull note with absent breathing sounds on the right side of the chest. AFfrontalchestradiographshowedamassiveright sidedpleuraleffusion. AContrastEnhancedComputed Tomography(CECT) of the chest showed that there was a right main bronchus endoluminal mass causing bronchial cut off and collapse (Figure-2). There was also evidence of extensive mediastinal lymphadenopathy with massive right sided pleural effusion and multiple sub pleural nodules suggestive of pleural metastases.

FNAC of the left infraclavicular mass and axillary mass showed metastatic well differentiated squamous cell carcinoma. The patient was not taken up for bronchoscopy and biopsy due to his poor performance status. He was treated symptomatically with thoracocentesis. The Ppatient and his relatives denied further treatment in view of poor prognosis.

DISCUSSION

Cancers mainly spread by three mechanisms, local invasion; lymphatic stream; and/or haematogenous spreading. The mechanism of spread depends on the particular tumour subtype and location. Although tumours can create their own blood supply by the process of angiogenesis, they do not have their own lymphatic drainage and spread is initially by local invasion of surrounding lymphatics. Malignant cells may also be scavenged directly from the interstitial tissues by surrounding lymphatics. They may then drain into regional lymph nodes prior to any direct vascular invasion by the tumours. Most of these cells will die but some may have the ability to survive and grow in a ne wenvironment. This depends on the underlying cell properties and genetics of the particular tumour type. Should the cell survivs, a tumour grows in the lymph node and may then progress to subsequent nodes.

The tumour may also locally invade beyond the lymph node capsule. Once a lymph node is completely invaded by the tumour, the usual lymph node drainage of the region will be disrupted, which may result in retrograde lymphatic spread.[2] This was perhaps the mechanism in our case wherein the contralateral chest wall and nodal metaatasis probably resulted from a tumour blockage of lymphatics and retrograde spread. Axilla as an unusual site of metastasis has been reported with an incidence of 6.6% in bronchogenic carcinoma.[3] The commonest primary site with contr lateral spread is the right upper lobe.[4]

Bronchogenic carcinoma involving a chest wall invasion can be explained by the fact that a tumoural spread may occur through newly developed lymphatic channels as a result of pleural adhesions.

Axillary lymph node metastases may be involved through a direct chest wall invasion of bronchogenic carcinoma or retrograde spread from a supraclavicular lymph node block.[5] With supportive care measures, the median survival rate of patients at the advanced stage of the disease is 16 to 17 weeks. Although chemotherapy is the backbone of treatment for metastatic diseases, the response rates are low, and survival times are poor. However studies show platinu based regimens improves symptoms, and can control and increasn the one-year survival rate chance between 10% and 20%.t. The benefits of therapy are usually restricted to otherwise healthy patients with lung cancer, such as those who maintain a good functional status.[6]

Since the expected overall survival time is low, minimizing hospitalization and causing minimal distress are important factors when determining the treatment.[7]

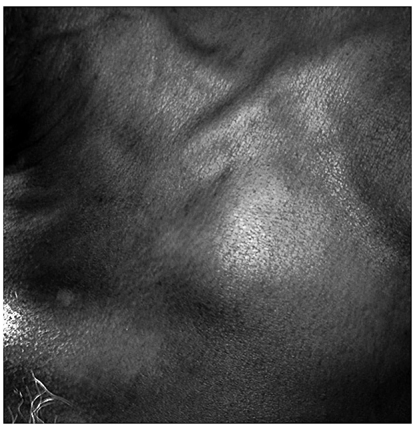

Figure 1. Left chest wall swelling

Figure 2. Left axillary mass

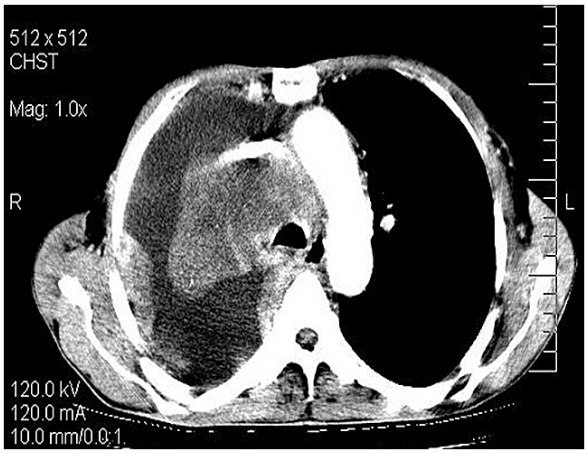

Figure 3. CECT showing right main bronchus endoluminal mass with collapse and massive right seded pleural effusion

REFERENCES

Vishak AK, Kamalaksh SK, Jayarama S Ketal. Chest wall mass of rare aetiology. J Ind Acad Clin Med. 2005; 6 (2):164- 6.

Graham R, Cherryman, Bruno, Morgan. Lymphatic System. In :David Sutton-Textbook of Radiology and Imaging. Vol 1. 7th ed. Churchill Livingstone ,2002:511- 512.

Marcantonio DR, Libshitz HI. Axillary lymph node metastases of bronchogenic carcinoma. Cancer 1995;76:803- 6.

Baird JA. The pathways of lymphatic spread of carcinoma of lung. Br j surg 1965;17:201-4.

Marc R, Françoise Le PB, Claire D. Axillary lymphnode metastases from bronchogenic carcinoma. Ann Thorac surg 1998;66:920-2.

Alexander S, David SE. Multidisciplinary Management of Lung Cancer. N Engl J Med 2004; 350:379-92.

Frank A, Baciewicz. Malignant pleural effusion. In: Harvey I P, James BM, David HJ et al- Lung Cancer principles and practice 2nd ed. Lippincott Williams and Wilkins, 2000:1030-31.