CASE REPORTS

SOLITARY PULMONARY NODULE A RARE CASE

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ABSTRACT

A middle aged man presented with a solitary pulmonary nodule. He had a diagnostic dilemma as the CT guided FNAC was inconclusive. The frozen section exam reported it to be malignant so a lobectomy was performed for this lesion. The final histopathology report confirmed it to be a very rare tumor of extra skeletal synovial sarcoma.

Keywords: Pulmonary nodule, Soft tissue neoplasm, Synovial sarcoma.

INTRODUCTION

The synovial sarcoma is a variety of neoplastic lesion that was initially found around joints and hence named synovial sarcoma. It has been defined by Fisher and associates as a mesenchymal spindle-cell tumor that displays variable epithelial differentiation, including glandular formation[1].The tumor can be either monophasic (spindle cells only) or biphasic (spindle cells with glands). Over time, it has become apparent that these tumors do not arise from the synovium and can be found anywhere in the body but the rarity of presentation in the extra skeletal sites particularly as solitary pulmonary nodule merits their report[2].

CASE REPORT

A middle aged adult smoker who smoked 1 pack per day for last 20 years, presented with chronic non-productive cough of 04 months duration. There was no history of hemoptysis, chest pain, dyspnoea, hoarseness of voice, jaundice, bone pains, fits or urinary complaints. The systemic examination was unremarkable. His biochemical profile was within normal limits. The Chest X-ray posteroanterior view showed a 2.5 x 3 cm nodule in the left mid zone. The Computed Tomography scan confirmed the solitary pulmonary nodule in the left upper lobe. There was no associated mediastinal lymphadenopathy, pleural effusion or any other nodule in the lungs. The lesion was peripheral and hence bronchoscopic biopsy could not be obtained. CT guided FNAC was inconclusive. In this scenario a decision of thoracotomy was planned and a course of wedge resection, frozen section of the lesion and proceed according to the report was chosen. The frozen section was reported to be "Malignant". Per-operatively the hilar lymph nodes and interlobar nodes were found to be enlarged. There was no mediastinal lymphadenopathy. The patient was staged T2N1M0. Therefore a left upper lobectomy was performed with removal of all visible lymphnodes in the area. The chest was closed in layers and two drains were left in position one was placed basally and other one apically. Post operatively there was no airleak or blood drainage and the course was uneventful. The patient was started with incentive spirometery and mobilized in bed the same night. His final histopathology report confirmed it to be an extra skeletal synovial sarcoma. It was biphasic having both spindle cell component and epithelial component in the form of focal glandular orientation. On immuno histochemistry the tumor was strongly positive for CD-99, vimentin, BCl-2 and EMA was positive in the epithelial component. There was no lymphnode involvement and he was staged to as T2N0M0. He was assessed in the multidisciplinary conference and a bone scan and V/Q scan were advised to evaluate for metastasis. Both were reported to be negative for any metastasis. Literature was consulted and in the light of previously evidenced experience it was decided that no adjuvant

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chemo or radio therapy is required and surgical excision with clear margins is curative. The patient is now kept on a quarterly follow-up for next 01 year.

DISCUSSION

The solitary pulmonary nodules have a diverse etiology stemming from every branch of pathology. The incidence of malignancy is not yet firmly established and with the evolution of the modalities of detection and diagnosis of the pulmonary pathologies the frequency and accuracy of diagnosis of SPN is changing[2]. The lesion may be metastatic or primary. The metatstic lesions are 10 to 15 % of SPNs. Amongst other lesions the incidence of malignancy varies from 10 -79% in various studies. But the proportion of lung cancer in malignant lesions and granulomas amongst the benign lesions is fairly the same and found to be 85-95% of the individual subsegment[2]. The rare forms of lung cancer thus form a minute fraction of the whole spectrum.

Centrally located masses are more commonly associated with symptoms of dyspnoea, chest pain, hemoptysis or pneumonitis and peripheral lesions are often asymptomatic or simply a non-productive cough. Whereas symptoms of malaise, fatigue, anorexia, and fever are linked with an acute or subacute infectious or inflammatory process. This was almost the course followed in our patient. The most common sarcomas contributing to pneumo- thorax are osteosarcoma and synovial sarcomas[3]. Although the very size of the lesion in our patient made the radiological detection very easy, the histopatholgical properties of requirement of specific staining made the initial FNACs non-specific.

However on the histopathology section the immunohistochemical studies had made it possible to diagnose synovial sarcoma by application of specific markers4as was done in this case.

Keel and coworkers[5] have reported a study of 26 primary pulmonary sarcomas out of which six (23%) were synovial sarcomas (23%). Bacha and colleagues6 followed these patients of sarcoma and found that the size and grade did not correlate with the survival but the completeness of the resection did. Thus these authors concluded that patients with pulmonary sarcomas may have an acceptable survival rate if the resection is complete. In line with this we removed the lesion in toto by right upper lobectomy and having clear bronchial margins.

CONCLUSION

There can be some rare causes of SPN. If there is no pre-operative tissue diagnosis, frozen section can be very helpful in the management of such lesion.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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