A Rare Case of Hamartoma
Chest Wall Following Trauma in a 42-year-old Man

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ABSTRACT
Background: Chest wall mesenchymal hamartoma (CWH) is a distinct and extremely rare tumor-like lesion of the thorax. It usually presents in the neonatal period or in infancy. The common presentation is in the form of a visible chest wall mass with or without respiratory distress. Case presentation: A 42-year-old man with a history of chest wall trauma since 5 years ago was admitted with a swelling of the anterior of the chest wall and during this period has grown slowly. Physical examination showed a left anterior chest wall deformity. Chest radiographs and chest CT showed a left anterolateral chest wall mass involving the fourth and fifth ribs. Thoracotomy was performed. The tumor and involved ribs were resected with a 5cm safe margin. The histopathologic examination showed hamartoma. The patient has been followed up since 60 month ago, and has not had any complaints in this time. Result: Despite the rarity of chest wall hematoma, this side effect must always be taken into consideration while studying the chest wall injuries especially in the case of trauma history due to other differential diagnosis and her side effects such as respiratory problems. Conclusion: Although rare, this condition ought to be kept in mind while dealing with hamartoma Chest wall following trauma in order to avoid its complications such as respiratory problems. Surgical excision is usually curative in combination with conservative therapy if possible.
Key words: Hamartoma, Adult , Chest wall.

1. INTRODUCTION
Chest wall mesenchymal hamartoma (CWH) is a distinct and extremely rare tumor-like lesion of the thorax (1). It usually presents in the neonatal period or in infancy.

The common presentation is in the form of a visible chest wall mass with or without respiratory distress. Mesenchymal hamartoma has a benign course and is often mistaken for a malignant tumor both radiologically and on histopathologic studies (2).

Surgical indications include cardiac or pulmonary compromise caused by compression or physically deforming masses (3, 4, 5). The role of conservative management is uncertain because the natural history of the lesion is unknown (6).

2. CASE REPORT
A 42-year-old man with a history of chest wall trauma since 5 years ago was admitted with a swelling of the anterior of the chest wall And during this period has grown slowly (Figure 1).

Physical examination showed a left anterior chest wall deformity. Laboratory investigations including CBC, U/A, liver, and renal function test results were normal. Chest radiographs and chest CT showed a left anterolateral chest wall mass involving the fourth and fifth ribs (Figure 2).

Thoracotomy was performed. The tumor and involved ribs were resected with a 5cm safe margin (Figure 3).

The histopathologic examination showed hamartoma (Figure 4).
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The patient has been followed up since 60 month ago, and has not had any complaints in this time.

3. RESULT

Despite the rarity of chest wall hematoma, this side effect must always be taken into consideration while studying the chest wall injuries especially in the case of trauma history due to other differential diagnosis and her side effects such as respiratory problems. Surgical interventions, conservative treatment and, in rare cases, radiotherapy and chemotherapy can be really effective.

4. DISCUSSION

Chest wall mesenchymal hamartoma is rare lesion usually seen in infants (7). Its incidence is estimated to be 1 in 3000 among primary bone tumors (8) or less than 1 in 1 million in the general population (9). Mesenchymal hamartoma is more common in males (2).

Mesenchymal hamartoma is not a true neoplasm (9). The usual mode of presentation is a visible chest wall mass with or without respiratory symptom (2). Mesenchymal hamartoma of the chest wall is usually multi-focal and develops early in fetal life (10). It commonly presents at or shortly after birth as an extrapleural mass arising from the rib cage with or without respiratory distress (6). The mass can present as an intrathoracic and/or extrathoracic lesion. It is mostly unilateral and more often in the right hemithorax (11, 12).

Bilateral mesenchymal chest wall hamartomas are rarer and may be confused with a malignancy (13). The most important diagnostic tools of CWH are the radiological characteristics on plain chest x-ray, computed tomogram, and magnetic resonance imaging (14).

On plain chest x-ray, it appears as an extrapleural mass originating from one or more ribs containing irregular areas of mineralization and ossification. The ribs are completely destructed centrally and distorted or partially eroded at the periphery because of the mass effect of the lesion (15, 16).

CT is especially more helpful in making the diagnosis because it demonstrates the bony origin of lesion and intralusal calcification (11, 17).

Although definitive diagnosis can be made only by histopathologic examination, fine-needle aspiration cytology has provided accurate cytologic assessment of those characteristics distinctive for MH when correlated with imaging and clinical features (18, 19).
Various treatment modalities have been described including surgical removal of the mass lesion and thermal radio-ablation (8).

Management of MH may be surgical, which is complete resection followed by prosthetic mesh repair of chest wall or by conservative approach, depending on the clinical presentation (2).

The treatment of choice for these symptomatic lesions is wide en bloc excision of the involved part of the chest wall including the involved ribs, underlying pleura, intercostal muscles, and neurovascular bundles (18, 20). Radiotherapy or chemotherapy has been used in some cases; however, they do not offer any established therapeutic benefits (18). The main complications encountered with surgical treatment include significant chest wall deformity and progressive scoliosis. There is also a trend toward conservative management unless there is respiratory compromise or significant deformity (21).

5. CONCLUSION

Although rare, this condition ought to be kept in mind while dealing with hamartoma Chest wall following trauma in order to avoid its complications such as respiratory problems. Surgical excision is usually curative in combination with conservative therapy if possible.

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