

A 32 Year Old Man with Bridging Rib Lesion

Ayman F Yousef^{1*}, Mohammed Alamassi² and Mohammed Ishaq²

¹Consultant Cardiothoracic Surgeon, Department of Thoracic Surgery, King Saud Medical City, Ministry of Health, Riyadh, Kingdom of Saudi Arabia

²Consultant Thoracic Surgeon, Department of Thoracic Surgery, King Saud Medical City, Ministry of Health, Riyadh, Kingdom of Saudi Arabia

***Corresponding Author:** Ayman F Yousef, Consultant Cardiothoracic Surgery, Department of Thoracic Surgery, King Saud Medical City, Ministry of Health, Riyadh, Kingdom of Saudi Arabia.

Received: February 19, 2020; **Published:** February 27, 2020

Abstract

Bridging ribs can be present as normal variant with no history of trauma and may involve posterior or anterior portion of ribs or may be complete rib. Bridging ribs can be occur anywhere along the ribs. The bridging may be partial or complete and pseudoarthrosis can be present. In our case, a 32 year old man, not known to have any health related issues, not smoker, who had on and off posterior Lt chest pain, that was aggravated during inspiratory phase for the last four years, lastly chest CT done and showed fusion(bridging) between 7th and 8th ribs on the Lt side posterior aspect of chest. Based on the features of the clinical signs and radiography of the lesion, diagnosis of ribs bridging was made. The patient was treated with a surgical excision lesion (with Lt Thoracotomy), after failure of conservative treatment. Post operatively, the patient achieved good functional recovery and discharged from hospital 5 days post operatively. Bridging rib is an unusual congenital condition and represents a non-infectious course in ribs with low morbidity. The surgical management was successful in relieving the patient symptoms.

Keywords: Bridging Rib; Congenital Condition

Introduction

Bridging ribs are considered as congenital anomaly that's occurred in form of developmental fusion between two or more ribs that's appear as morphological anomaly and anatomical variants that's occur in 0.15% to 0.31% of population, which are more common in female [1].

Case Report

32 year old man who was referred to our hospital's department in 20/2/2019 with a history of four years course of sever local pain on the Lt side of his chest posterior aspect that's aggravated during inspiration, the patient had no history of pervious trauma, fever or infection, in addition there was no evidence of any skin lesion such as acne or pustules.

Description of the case report

The physical examination showed localized tenderness over 7th to 8th ribs with chronic limitation of respiration during inspiratory phase due to pain, the preoperative CT chest done and showed fusion(bridging) between 7th and 8th ribs on the Lt side posterior aspect

of chest (Figure 1). His blood and biochemistry tests results were within normal limits. Based on features of clinical sign sand symptoms with radiological results. The bridging ribs was initially diagnosed. However the symptoms persisted intermittently despite treatment with Non-steroidal anti-inflammatory drugs, surgery (Lt. Thoracotomy) was performed for the patient, and we found a double bony extension (bridging ribs) around 12 cm in length between Lt. 7th and 8th ribs with curved rods like in shape (Figure 2) and these lesions were completely excised (Figure 3) and post operatively the patient was improved without any complication and discharged home on the fifths postoperative day.



Figure 1



Figure 2

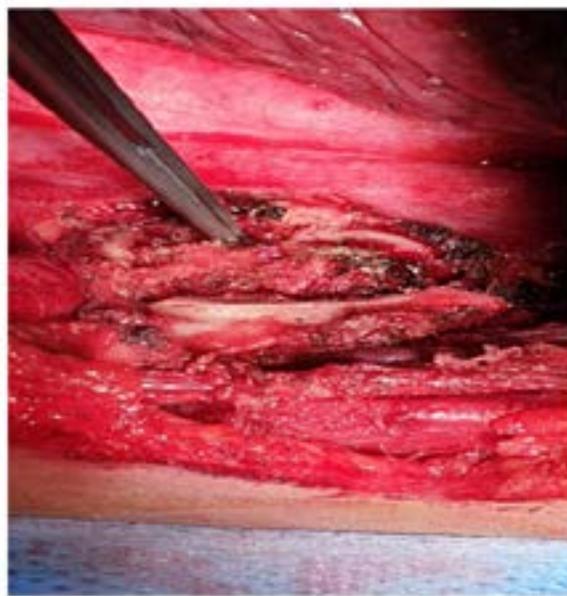


Figure 3

Discussion

A variety of normal variants or pathologic conditions of the ribs may be overlooked at chest radiography if the ribs are not evaluated carefully. Rib lesions may simulate pulmonary disease as well. Normal rib variants include cervical, intrathoracic and pelvic ribs; forked rib; fusion and bridging; and pseudarthrosis of the first rib. Trauma-related lesions are common and usually occur in isolation but can alert the radiologist to other injuries. All these conditions are considered as differential diagnosis of bridging ribs. In most cases, radiography is sufficient for the identification and diagnosis of normal variants and pathologic conditions of the ribs [2]. Estimations of the prevalence of congenital rib abnormalities, including extranumerary ribs, in asymptomatic general populations have ranged from 0.27% to 0.74%. The prevalence of cervical ribs in patients with thoracic outlet syndrome (TOS) is 8.5%. The increased incidence of bone anomalies at the thoracic outlet in patients with TOS has been interpreted to suggest that these abnormal structures cause the syndrome by impinging on the brachial plexus, subclavian artery, or vein [3].

Conclusion

Congenital rib anomalies are not unusual findings in medical and radiological practice. It is useful that clinician and radiologists are familiarised with the imaging appearance of these malformations, since they can be misread as tumoural, traumatic or inflammatory lesions of the chest wall, lungs or pleura. Nevertheless, these anomalies reflect some disturbances during the embryo development, leading us to propose a potential classification that could contribute to a better understanding of this pathology.

Authors' Contribution

All the authors have contributed to the study concept, design, data collection, data analysis for interpretation, and writing this manuscript.

Bibliography

1. Kurihara Y, *et al.* "The Ribs: Anatomic and Radiologic Considerations". *RadioGraphics* 19.1 (1999): 105-119.
2. Guttentag A and Salwen J. "Keep Your Eyes on the Ribs: The Spectrum of Normal Variants and Diseases That Involve the Ribs". *RadioGraphics* 19.5 (1999): 1125-1142.
3. Brewer Z, *et al.* "Thoracoscopic Resection of a Symptomatic, Congenital Rib Synostosis". *The Annals of Thoracic Surgery* 101.4 (2016): 1596-1515.

Volume 3 Issue 3 March 2020

©All rights reserved by Ayman F Yousef, *et al.*