CASE REPORT / *Olgu Sunumu*

DOI: 10.5505/sakaryamedj.2015.58070

Thoracoscopic Management of Fibrous Dysplasia: First Experience in Turkey

Fibröz Displazinin Torakoskopik Tedavisi: Türkiye'de İlk Tecrübe

Bayram Altuntaş, Yener Aydin, Ali Bilal Ulaş, Coşkun Daharlı, Atilla Eroğlu

Ataturk University, Medical Faculty, Department of Thoracic Surgery, Erzurum, Turkey

Abstract

Fibrous dysplasia is a osseous pathology and bone structure is replaced by fibro-osseous tissue. Our patient was a 36-year-old female with a complaint of swelling on the right side of chest for seven years. A magnetic resonance imaging of the thorax showed a mass measuring 86x28 mm in diameter in the right anterolateral chest wall that was marked after intravenous administration of contrast medium. The mass was removed by thoracoscopic technique. Histopathologic examination confirmed the diagnosis of fibrous dysplasia. We believe that video-assisted thoracoscopic surgery will be main procedure for the surgical management of fibrous dysplasia of ribs in next years. ***(Sakarya Med J 2015, 5(4):230-233)***

Keywords: Chest wall; Fibrous dysplasia; Thoracoscopy

Özet

Fibröz displazi bir kemik patolojisidir ve kemik yapı fibro-oseos doku ile yer değiştirmiştir. Bizim hastamız, yedi yıldır göğüs kafesinin sağ tarafında bir şişlik şikâyeti olan bir bayan hastaydı. Toraks MR görüntülemesi, intravenöz kontrast madde sonrası belirginleşen, toraksın sağ anterolateralinde 86x28 mm çapında kitle gösterdi. Kitle torakoskopik teknikle çıkarıldı. Histopatolojik inceleme sonucu, fibröz displazi olarak geldi. Biz, gelecek yıllarda, kaburgaların fibröz displazisinin cerrahi tedavisinde, video-yardımlı torakoskopik cerrahinin asıl prosedür olacağına inanıyoruz. ***(Sakarya Med J 2015, 5(4):230-233)***

Anahtar Kelimeler: *Göğüs duvarı; Fibröz displazi; Torakoskopia*

Correspondence / Yazışma Adresi : Bayram ALTUNTAS
Ataturk University, Medical Faculty, Department of Thoracic Surgery, Erzurum, TurkeyPostal code:25070
P: +90 442 3448440 F: +90 442 2361301 E-mail: draltuntas@hotmail.com

Received / *Geliş Tarihi* : 20.05.2015

Accepted / *Kabul Tarihi* : 25.05.2015

INTRODUCTION

Fibrous dysplasia (FD) is a osseous abnormality and bone structure is replaced by fibro-osseous tissue[1]. This change causes expansion and loss of the bone cortex. FD may effect the single or multiple bones[2]. Femur, humerus, skull and ribs are the most commonly affected bones[3]. This benign tumour is approximately 30% non-malignant thoracic wall tumours[4]. The management of FD includes operative and non-operative methods. Video-assisted thoracoscopic surgery can be easly applied technique in thoracic FD when surgical intervention is indicated. Hence, we present a patient with thoracic fibrous dysplasia who was treated by thoracoscopic technique. To the best of our knowledge, the treatment of fibrous dysplasia with video-assisted thoracoscopic surgery has not been previously reported in Turkey.

CASE REPORT

Our patient was a 36-year-old female with a complaint of swelling on the right side of chest for seven years. On physical examination, a 8x2 cm painfull mass lesion was noted on the right anterolateral region of chest. A magnetic resonance imaging of the thorax showed a mass measuring 86x28 mm in diameter in the right anterolateral chest wall that was marked after intravenous administration of contrast medium (Figure 1). For diagnosis and treatment, the patient was prepared for surgery. After double lumen intubation, the patient was placed in the left lateral decubitus position and an incision 1 cm in length was made at seventh intercostal space at posterior axillary line. After entering the thorax, a thirty-degree camera inserted through this opening. Under the camera guidance, a second incision 2 cm in length was made at sixth intercostal space at anterior axillary line. The periosteum of fifth rib was stripped. Afterward, the rib was cut and removed (Figure 2). Single chest tube was inserted. Histopathologic examination confirmed the diagnosis of fibrous dysplasia. Postoperative period was uneventful.

DISCUSSION

Fibrous dysplasia is a non-malignant osseous tumour and it is approximately 7% of benign skeletal tumours[3]. Three quarters of patients are under the seventy-five years[3]. FD has two forms follow as polyostotic and monostotic forms and polyostotic FD may be associated with McCune-Albright syndrome including caf´e-au-lait cutaneous pigmentation, polyostotic FD, and endocrine hyperfunction[1].

Figure 1. The magnetic resonance imaging of the thorax showed a mass measuring 86x28 mm in diameter in the right anterolateral chest wall.

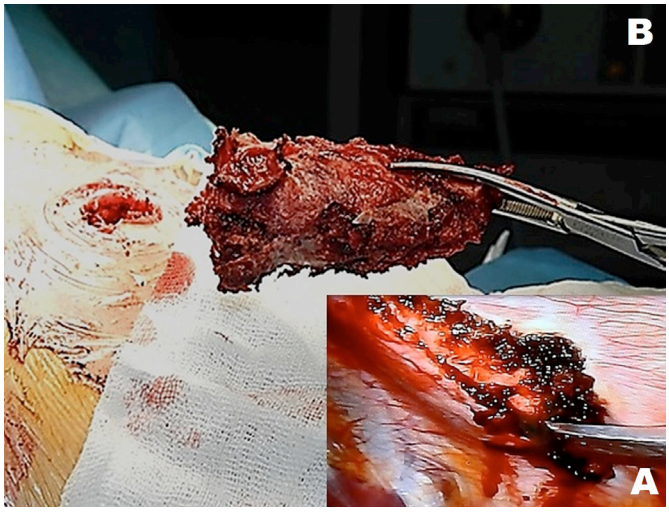

Figure 1. A: The thoracoscopic imaging of periosteal stripping. B: Removing of the resected rib from a 2-cm incision.

Fibrous dysplasia has characteristic imaging features. Expansion of medulla, marked trabeculation and loss of the bone cortex is usually seen on CT scan[3]. Sometimes, diagnosis is difficult because of tumour similarity on MRI in FD, especially in monostotic type[2]. Nevertheless, MRI is helpful to evaluate the lesion size and decrease in signal intensity on T1-weighted images is typical radiological finding[3].

Clinical presentation depends on location of pathologic process. The most common complaint is pain. Rapid increase in size of lesion may occur because of malignant transformation[3]. Skeletal deformity, pathologic fractures, neural involvement and malignant transformation are terrible events[2].

Asymptomatic and mild symptomatic patients should be observed. Surgical intervention is indicated in presence or suspicion of malignancy, ineffective conservative therapy and improve the skeletal deformity[3]. Surgical therapy of thoracic FD include open and thoracoscopic surgery. Traditionally, open surgery has been performed for many years in thoracic FD. Despite the widespread use of thoracoscopy in thoracic surgery, thoracoscopic management of FD has been reported rarely[5,6]. We believe that video-assisted thoracoscopic surgery is easly applied in these tumours and this technique will be main procedure for the surgical management of fibrous dysplasia of ribs in next years.

References

1. Traibia A, Oueriachia FE, Hammoumia ME, Bouzidib AA, Kabiria EH. Monostotic fibrous dysplasia of the ribs. Interactive CardioVascular and Thoracic Surgery 2012;14:41–43.
2. Rossi DC, Fiaschi P. Extensive fibrous dysplasia of skull base: case report. Letter to the Editor. Neurol Sci DOI 10.1007/s10072-014-2034-8
3. Mahadevappa A, Patel S, Ravishankar S, Manjunath GV. Monostotic Fibrous Dysplasia of the Rib: A Case Report. Case Reports in Orthopedics 2012;1-5.
4. F. R. Singer. Fibrous dysplasia of bone: the bone lesion unmasked. The American Journal of Pathology 1997;151(6):1511-1515.
5. Shim JH, Soon-Ho Chon, Lee CB, and Heo JN. Polyostotic rib fibrous dysplasia resected by video-assisted thoracoscopic surgery with preservation of the overlying periosteum. J Thorac Cardiovasc Surg 2010;140:938-940.
6. Gaetano Rocco G, Fazioli F, Martucci N, Cicalese M, La Rocca A, La Manna C et al. Video-Assisted Thoracic Surgery Rib Resection and Reconstruction With Titanium Plate. Ann Thorac Surg 2011;92:744 –745.