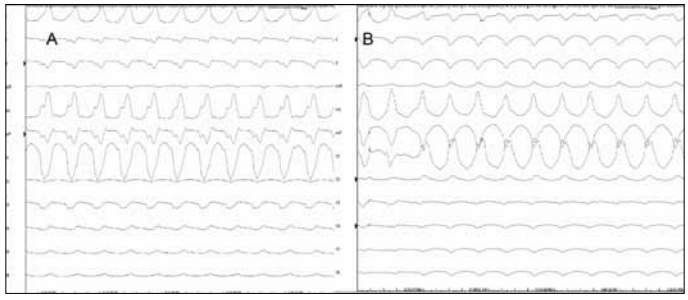
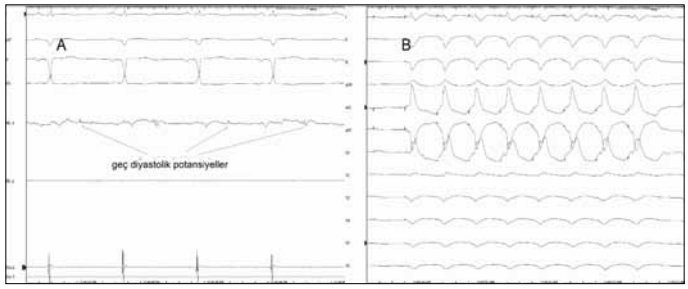
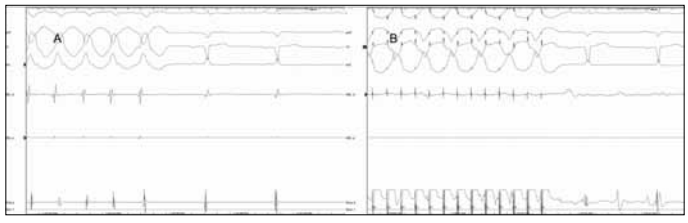


Şekil 4. Pace indüksiyonu ile indüklenen iki farklı QRS morfolojisinde sürekli VT
VT - ventriküler taşikardi



Şekil 5. Kaydedilen geç diyastolik potansiyeller ve buralardan yapılan indüksiyon ile benzer QRS morfolojisindeki VT'lerin görülmesi
VT - ventriküler taşikardi



Şekil 6. Ablasyon sonrası indüksiyonla oluşturulan ve kardiyoversiyona gerek duyulmayan sürekli olmayan VT'ler görülmekte
VT - ventriküler taşikardi

Tartışma

Yüksek riskli hastalarda RFA tedavisi, ICD şoklama sayısını önemli derecede azaltmaktadır. Fakat supraventriküler taşikardilerde yapılan RFA tedavisine göre başarı şansı daha düşüktür (2). Sunduğumuz hastada da daha önce VT'ne yönelik yapılan RFA'nun başarılı olmadığını saptadık ve tekrar RFA yaptık.

Yapılan çalışmalarda VT'nin gelişmesinden sorumlu mekanizmanın skar bölgelerindeki yavaş iletili reentri halkalarının olduğu gösterilmiştir. Bu yavaş iletili reentri halkaların voltaj haritalamada geç diyastolik potansiyellerin görüldüğü noktalarda ve bu noktaların çevresinde olduğu rapor edilmiştir. Bununla birlikte voltaj haritalamada geç diyastolik potansiyellerin tespit edildiği noktalara ve çevresine yapılan RFA'ın işlem başarısını arttırdığı da tespit edilmiştir (2, 3). Biz de hastamızda voltaj haritalama yöntemi ile geç diyastolik potansiyel noktalarını tespit ettik. Hastamızda VT'de kardiyojenik kollaps geliştiği için haritalamamızı sinüs ritmindeyken gerçekleştirdik ve tespit ettiğimiz bu geç diyastolik potansiyelli noktalara ve çevresine RFA uyguladık.

Ventriküler taşikardinin RFA'nında kullanılan bir diğer yöntem de skar sınırlarının ablasyonudur. Reddy ve ark. (4) yaptıkları çalışmada ICD'li hastalara Smash VT RFA yapmışlar ve 2 yıl takip etmişlerdi. Çalışmada şok ya da antitaşikardik pacing'e gerek kalmadan hayatta kalabilme primer son nokta olarak belirlenmişti. Primer son noktalarda Smash VT RFA yapılan hastalar lehine anlamlı bir artış saptanmıştı (p=0.007). Hastamızın yüksek riskli olması nedeniyle geç diyastolik potansiyel bulunan noktaların RFA'sı yanında Smash VT RFA'u da uyguladık. Yaptığımız işlemin başarısını indüksiyon sonucu şoklamanın olmamasıyla da gösterdik. Ancak ICD takılı yüksek riskli hastalarda VT RFA'dan sonra da ani ölüm riski devam etmektedir. Bu nedenle hastamıza antiaritmik tedavisini işlem sonrası da devam ettirdik.

Sonuç

Skar dokularına bağlı VT gelişen hastalarda geç diyastolik potansiyel noktaların yanı sıra Smash VT RFA'nun da yapılması işlemin başarı şansını daha da arttırabilmektedir. Bizler olgumuzda bunu göstermeye çalıştık.

Kaynaklar

1. Stevenson WG. Ventricular scars and ventricular tachycardia. Trans Am Clin Climatol Assoc 2009; 120: 403-12.
2. Raymond JM, Sacher F, Winslow R, Tedrow U, Stevenson WG. Catheter ablation for scar-related ventricular tachycardias. Curr Probl Cardiol 2009; 34: 225-70. [CrossRef]
3. Tsuchiya T, Okumura K, Honda T, Honda T, Iwasa A, Yasue H, et al. Significance of late diastolic potential preceding Purkinje potential in verapamil-sensitive idiopathic left ventricular tachycardia. Circulation 1999; 99: 2408-13.
4. Reddy VY, Reynolds MR, Neuzil P, Richardson AW, Taborsky M, Jongnarangsin K, et al. Prophylactic catheter ablation for the prevention of defibrillator therapy. N Engl J Med 2007; 357: 2657-65. [CrossRef]

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A mobile structure at the entrance of the left atrial appendage in a patient with malignant fibrous histiocytoma

Malign fibröz histiyositomasi olan bir hastada sol atriyal appendiks girişindeki hareketli yapı

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Introduction

Cardiac metastasis in malignant fibrous histiocytoma (MFH) is extremely rare. We report a case of MFH in which real-time three-dimensional transesophageal echocardiography (RT 3D-TEE) revealed an uncommon mobile structure at the left atrial appendage entrance. However, the genesis of this finding remained unsolved.

Case Report

A 74-year-old female patient presented with a new onset of painful swelling of the right elbow accompanied by bullous skin lesions. She had no significant past medical or surgical history. Physical examination showed a 8x13 cm tumour. Ultrasound of the mass revealed an inhomogeneous solid tumour with some degree of cystic formation. Excision biopsy confirmed malignant fibrous histiocytoma (MFH). Staging work-up excluded metastases. Routine two-dimensional transthoracic echocardiography revealed biatrial dilatation, mild left ventricular hypertrophy, normal left ventricular systolic function, and mild-to-moderate mitral regurgitation. A small mobile structure in the left atrium was suspected and the patient underwent transesophageal echocardiography (TEE) using an X7-2t TEE transducer and iE33 ultrasound system (Philips Medical Systems, Andover, MA, USA) on the following day. A 12x3 mm mobile structure at the entrance of the left atrial appendage (LAA) could be demonstrated (Fig. 1). There was no spontaneous echo contrast present and LAA blood flow velocity was normal at 75 cm/s. Laboratory tests included platelet count, prothrombin time, markers of coagulation activation (e.g. thrombin-antithrombin-complex, D-Dimer) and C-reactive protein and all were normal. A 12-lead Holter electrocardiogram showed normal sinus rhythm. Repeat TEE was performed after 4 weeks and 3 months and demonstrated persistence of the mobile structure.

Discussion

Primary cardiac tumours are seldom with a necropsy incidence of 0.05% (1). A quarter of primary cardiac tumours are malignant, the majority of which are sarcomas (1). Metastatic cardiac tumours are more common and at least a hundred times more frequent than primary tumours (1, 2). Melanoma, leukaemia, and lymphoma are most frequently associated with metastases to the heart (2). Cardiac metastases due to soft tissue and bone sarcoma are extremely rare (2). MFH is the most common soft tissue tumour in the elderly, predominantly affecting the extremities (3). Metastases may reach the lung, liver, bone, and brain (3). However, there are only few cases reported in the literature, in which cardiac metastasis due to MFH was observed (4-6). Lee et al. (4) described a case of solitary cardiac metastasis due to MFH of the scalp. Left ventricular metastases from MFH of the posterior compartment of the right thigh occurring five years after treatment of the tumour by surgery and radiotherapy were observed by Recchia et al. (5). Sheikh et al. (6) reported a 50-year-old male with MFH of the right arm who developed pulmonary metastases and a mass lesion in the left atrium consistent with metastasis. Another case has been described by Ishibashi, in which pulmonary metastases of MFH with left atrial infiltration via the pulmonary vein were found (7).

In our case, no metastases were found during staging. The mobile structure at the entrance of the LAA was an incidental finding. Although cardiac metastases usually remain clinically unapparent, and hence are discovered incidentally in the majority of cases, the constant size and shape of the mobile left atrial structure argue against its metastatic nature.

Weis et al. (8) reported on a left atrial mobile mass with great similarities to our case with respect to size, shape and location. The authors found convincing evidence that the structure was a left atrial vegetation caused by *Staphylococcus aureus*. The appearance of the mass was preceded by radio-frequency catheter ablation for atrial fibrillation. However, in our case no medical procedure had been performed prior to the detection of the mass and there were no signs or symptoms of endocarditis present.

Left atrial thrombus is another potential explanation for the observed structure. Thread like left atrial thrombi have been previously described (9). However, presence of normal sinus rhythm, normal left atrial function, absence of spontaneous echo contrast, and persistence of the mass over a 3-month period do not necessarily support this notion.

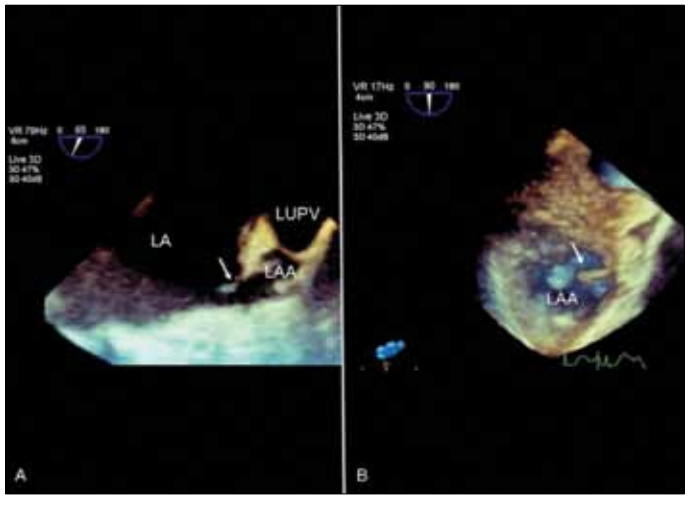

Figure 1. Panel A. A live 3D TEE image of the mobile structure (white arrow). Panel B. En face view of the LAA (3D zoom mode acquisition)

3D TEE - 3-dimensional transesophageal echocardiography, LA - left atrium, LAA - left atrial appendage, LUPV - left upper pulmonary vein

Conclusion

In conclusion, this case illustrates some of the challenges in the differential diagnosis of mobile left atrial masses in patients with malignancies. Although no definite diagnosis could be made, an organized threadlike left atrial thrombus seems to be the most likely diagnosis.

References

1. Klatt EC, Heitz DR. Cardiac metastases. Cancer 1990; 65: 1456-9. [CrossRef]
2. Reynen K, Köckeritz U, Strasser RH. Metastases to the heart. Ann Oncol 2004; 15: 375-81. [CrossRef]
3. Kearney MM, Soule EH, Ivins JC. Malignant fibrous histiocytoma: A retrospective study of 167 cases. Cancer 1980; 45: 167-78. [CrossRef]
4. Lee R, Fisher MR. MR imaging of cardiac metastases from malignant fibrous histiocytoma. J Comput Assist Tomogr 1989; 13: 126-8. [CrossRef]
5. Recchia F, Saggio G, Amiconi G, Di Blasio A, Cesta A, Candeloro G, et al . Cardiac metastases in malignant fibrous histiocytoma. A case report. Tumori 2006; 92: 76-8.
6. Sheikh AA, Ahmad M, Lone AR, Banday MA. Cardiac metastasis in malignant fibrous histiocytoma. Saudi Med J 2008; 29: 1041-3.
7. Ishibashi J, Akamatsu H, Egi K, Tanaka H, Sunamori M. A case of pulmonary metastasis of malignant fibrous histiocytoma with left atrial infiltration via the pulmonary vein. Kyobu Geka 2001; 54: 895-7.
8. Weis S, Piorkowski C, Arya A, Bollmann A. Septic vegetation at the left atrial appendage entrance after pulmonary vein ablation for atrial fibrillation. Europace 2008; 10: 215-7. [CrossRef]
9. Markan S, Haider N, Novalija J, Iqbal Z, Gandhi SD, Pagel PS. A mobile threadlike structure in the left atrium: Cor triatriatum, artefact, or thrombus?J Cardiothorac Vasc Anesth 2009; 23: 566-8. [CrossRef]

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