ARCHIVES OF HELLENIC MEDICINE: ISSN 11-05-3992

CASE REPORT
ΕΝΔΙΑΦΕΡΟΥΣΑ ΠΕΡΙΠΤΩΣΗ

Left atrial appendage thrombus
A high risk incidental finding

The left atrial appendage is a small sac in the wall of the left atrium. While its physiological function is not clear, its clinical significance is recognized in the context of coagulation and stroke. The case is presented of a patient with the incidental finding of a left atrial appendage thrombus, and the clinical relevance of such a finding is discussed.

ARCHIVES OF HELLENIC MEDICINE 2018, 35(1):111–113
ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2018, 35(1):111–113

D. Stranges,[1]
J. Espinosa,[1]
A. Lucerna,[1]
D. Grosiak[2]

[1]Department of Emergency Medicine, Rowan University SOM, Kennedy University Hospital, Stratford, New Jersey
[2]Department of Emergency Medicine, Virtua Hospital, Voorhees, New Jersey, USA

Θρόμβος στο ωτίο του αριστερού κόλπου: Ένα τυχαίο εύρημα υψηλού κινδύνου

Περίληψη στο τέλος του άρθρου

Key words

Computed tomography imaging
Left atrial appendage
Left atrial appendage thrombus
Thrombus

Submitted 22.5.2017
Accepted 1.6.2017

Thrombus of the left atrial appendage (LAA) is a well-known complication of atrial fibrillation and atrial flutter, and it is a primary reason for the use of anticoagulation as the standard care in these conditions.[1,2] In a patient without known arrhythmia, there is no way to identify LAA thrombus, because there is no reason to suspect it in the absence of an embolic phenomenon. The case is presented of a woman with LAA thrombus, diagnosed on computed tomography (CT) imaging of the chest during an emergency department (ED) workup for chest pain.

CASE PRESENTATION

A 50-year-old female presented at the ED with pleuritic chest pain. She was tachypneic, and her electrocardiogram (ECG) revealed sinus tachycardia, but no signs of ischemia. The initial laboratory tests were within normal limits. CT scan of the chest with intravenous (IV) contrast identified a large LAA thrombus (figures 1, 2). Anticoagulation therapy was initiated immediately. Follow-up CT scan of the chest 6 months later showed resolution of the thrombus (fig. 3).

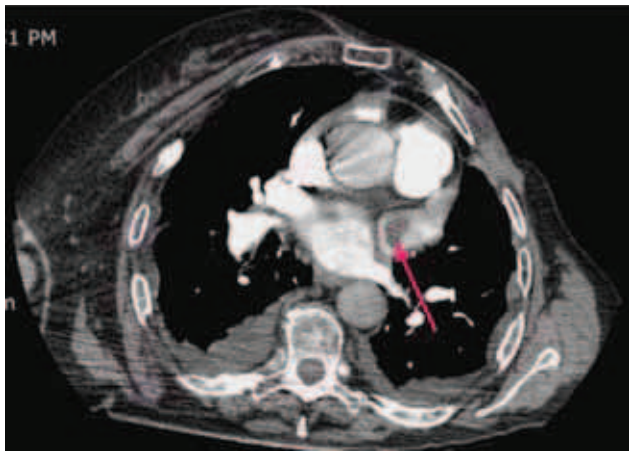

Figure 1. Chest computed tomography (CT) in a 50-year-old woman with chest pain (transverse view): Left atrial appendage (LAA) thrombus marked by arrow.

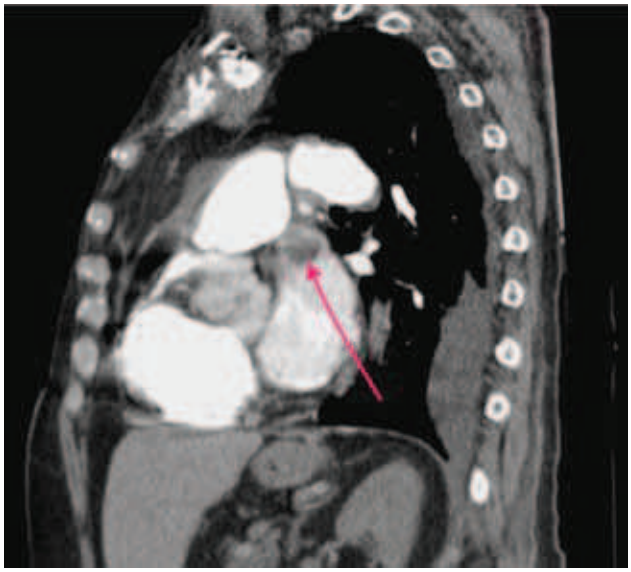

Figure 2. Chest computed tomography (CT) in a 50-year-old woman with chest pain (sagittal view): Left atrial appendage (LAA) thrombus marked by arrow.

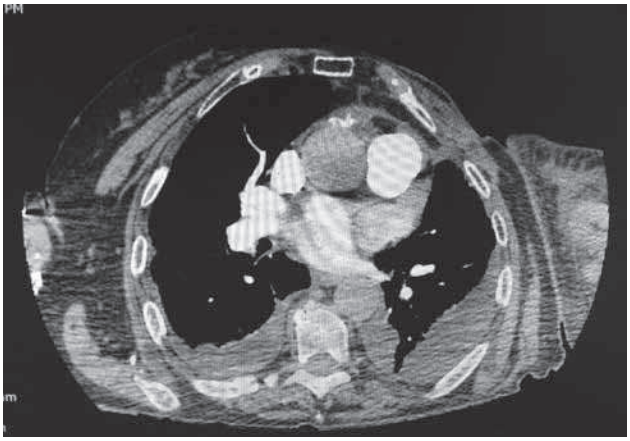

Figure 3. Six-month follow-up chest computed tomography (CT) in a 50-year-old woman with chest pain (transverse view) showing resolution of left atrial appendage (LAA) thrombus following anticoagulant treatment.

DISCUSSION

The LAA is considered the most likely single source of thrombus in patients with atrial fibrillation.[1] While it is an uncommon incidental finding, LAA thrombus carries a high risk of morbidity and requires prompt appropriate treatment.[1,3,4] The current recommended therapy is at least 45 days of anticoagulation, even in the absence of arrhythmia.[4,5] When identified, prompt treatment of LAA thrombus is essential to mitigate the associated risks. Chirillo and colleagues suggest that the diagnosis of LAA thrombus may become more common "since the use of transesophageal echocardiology prior to «fast track» cardioversion is becoming more and more frequent in patients with atrial fibrillation." They note that physicians need to be aware of the anatomical variants of the LAA.[6] The various morphological variants of LAA seen on CT and MRI may have different risks of embolic phenomena, with different implications for anticoagulation.[7]

LAA thrombus, although rare in the absence of arrhythmia, is well reported in the literature. With stroke treatment and prevention at the forefront of medicine, potential causes of cryptogenic stroke, such as LAA thrombus, should be investigated and understood. Retrospective studies could provide valuable information on the statistical risk associated with non-arrhythmogenic LAA thrombus.

ΠΕΡΙΛΗΨΗ

Θρόμβος στο ωτίο του αριστερού κόλπου: Ένα τυχαίο εύρημα υψηλού κινδύνου

D. STRANGES,[1] J. ESPINOSA,[1] A. LUCERNA,[1] D. GROSIAK[2]

[1]Department of Emergency Medicine, Rowan University SOM, Kennedy University Hospital, Stratford, New Jersey,
[2]Department of Emergency Medicine, Virtua Hospital, Voorhees, New Jersey, Ηνωμένες Πολιτείες Αμερικής

Αρχεία Ελληνικής Ιατρικής 2018, 35(1):111–113

Το ωτίο του αριστερού κόλπου είναι ένας μικρός σάκος στο τοίχωμά του. Αν και η φυσιολογική του λειτουργία δεν είναι γνωστή, εν τούτοις η κλινική του σημασία στο πλαίσιο της πήξης και του εγκεφαλικού επεισοδίου είναι σαφής. Περιγράφεται η περίπτωση μιας ασθενούς με τυχαίο εύρημα θρόμβου στο ωτίο του αριστερού κόλπου και η κλινική συσχέτιση αυτού του ευρήματος.

Λέξεις ευρετηρίου: Αξονική τομογραφία, Θρόμβος, Θρόμβος αριστερού κόλπου, Ωτίο αριστερού κόλπου

References

1. YAGHI S, SONG C, GRAY WA, FURIE KL, ELKIND MS, KAMEL H. Left atrial appendage function and stroke risk. *Stroke* 2015, 46:3554–3559
2. JANUARY CT, WANN LS, ALPERT JS, CALKINS H, CIGARROA JE, CLEVELAND JC Jr ET AL. 2014 AHA/ACC/HRS guideline for the management of patients with atrial fibrillation: Executive summary: A report of the American College of Cardiology/American Heart Association Task Force on practice guidelines and the Heart Rhythm Society. *Circulation* 2014, 130:2071–2104
3. AL-SAADY NM, OBEL OA, CAMM AJ. Left atrial appendage: Structure, function, and role in thromboembolism. *Heart* 1999, 82:547–554
4. PATTI G, PENGO V, MARUCCI R, CIRILLO P, RENDA G, SANTILLI F ET AL. The left atrial appendage: From embryology to prevention of thromboembolism. *Eur Heart J* 2017, 38:877–887
5. JABER WA, PRIOR DL, THAMILARASAN M, GRIMM RA, THOMAS JD, KLEIN AL ET AL. Efficacy of anticoagulation in resolving left atrial and left atrial appendage thrombi: A transesophageal echocardiographic study. *Am Heart J* 2000, 140:150–156
6. CHIRILLO F, FUSARO M, MORANA G, OLIVARI Z. An intriguing intracardiac mass in a woman with atrial fibrillation. Left atrial appendage (LAA) thrombus. *Heart* 2016, 102:693, 727
7. DI BIASE L, SANTANGELI P, ANSELMINO M, MOHANTY P, SALVETTI I, GILI S ET AL. Does the left atrial appendage morphology correlate with the risk of stroke in patients with atrial fibrillation? Results from a multicenter study. *J Am Coll Cardiol* 2012, 60:531–538

Corresponding author:

D. Stranges, Department of Emergency Medicine, 18 East Laurel Road, Stratford, NJ 08084, USA
e-mail: strangdm@rowan.edu