Cryptogenic stroke in two cases with left atrial band: coincidence or cause?

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Congenital left atrial band (LAB) has been reported previously. However, clinical significance of the LAB has not been clearly defined. Although LAB is generally known as a benign entity, it has been reported to be associated with Chiari’s network, patent foramen ovale, mitral valve prolapse, mitral regurgitation, and supraventricular arrhythmias. In this letter we report LAB in a 34-year-old male and 56-year-old female with the diagnosis of cryptogenic stroke. To our knowledge, the association of LAB with cardioembolic events has not been reported previously.

Case presentations

Cases 1 and 2 were 34-year-old male and 56-year-old female who were admitted with the diagnosis of ischaemic stroke. Both patients were referred to our clinic for investigation of possible cardioembolic causes of ischaemic stroke. Their cardiovascular examinations were within normal limits. Electrocardiograms revealed normal sinus rhythm. On trans-thoracic echocardiography chamber sizes, valvular structures, systolic and diastolic functions were within normal limits. We were not able to detect any thrombus or vegetation that would be the source of cerebral embolism. However, we detected a band-like structure in the left atria of both the cases (Figures 1 and 2, Supplementary Videos S1–3 online). On transoesophageal echocardiography, inter-atrial septa were intact and there was no patent foramen ovale. Their laboratory examinations were within normal limits and were not in accordance with any possible association with vascular pathologies or haematological disorders. Carotid Doppler ultrasound examinations were free of atherosclerotic plaque. The patients were discharged with warfarin treatment and were free of any events on sixth-month follow-up.

Discussion

The incidence of congenital LAB has been reported to be 2% in a clinico-pathologic study. However, it is very rarely reported during echocardiographic examinations. Majority of LABs are connected to left atrial side of fossa ovalis endocardium and composed of fibrous and muscle tissues.

Although LAB is generally known as a benign entity, it has been reported to be associated with Chiari’s network, patent foramen ovale, mitral valve prolapse, and mitral regurgitation. In addition, LAB has been found to be associated with an increased incidence of supraventricular arrhythmias. However, to our knowledge, the association of LAB with cardioembolic events has not been reported previously.

Cryptogenic stroke is a diagnosis of exclusion. In a report by Pujadas et al. there was no mention about LAB as a cause of ischaemic cardioembolic stroke. Lack of other potential risk factors of cardioembolic stroke and normal...
laboratory examinations lead us to suggest that LAB might be the cause of cardioembolism in the present two cases. Absence of patent foramen ovale supports our idea.

In conclusion, in cases with ischaemic stroke, especially the ones with undetermined aetiology, LAB should be kept in mind as a potential cause of cardioembolism.

### Supplementary data

Supplementary data are available at *European Journal of Echocardiography* online.

### References