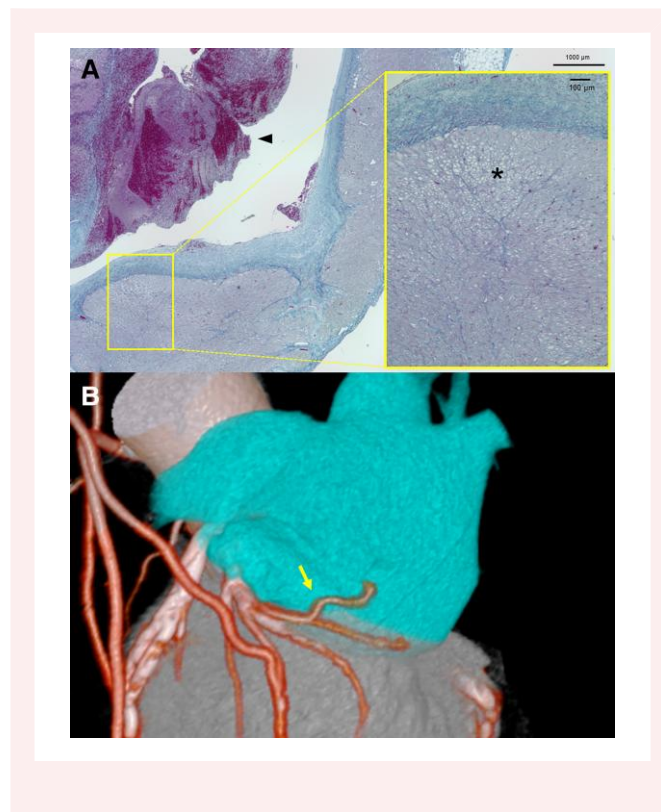


Left atrial appendage thrombus secondary to left atrial ischaemia owing to impaired left atrial branch perfusion

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A 64-year-old man without history of atrial fibrillation was admitted for congestive heart failure owing to systolic impairment of the left ventricular posterior–inferior wall (left ventricular ejection fraction, 35%; [Video 1](#)). He developed chest discomfort several weeks prior, suggesting the aetiology would be a recent myocardial infarction. On Day 3 of hospitalization, he developed acute chest pain with

ST-elevation in precordial leads on electrocardiogram (see [Supplementary material online, Figure A](#)). Coronary angiography revealed occlusion of the middle-left anterior descending (LAD). Moreover, occlusions of the right coronary and left circumflex arteries were also identified (see [Supplementary material online, Figures B–D, Video 2](#)). Coronary slow-flow phenomenon was observed in the

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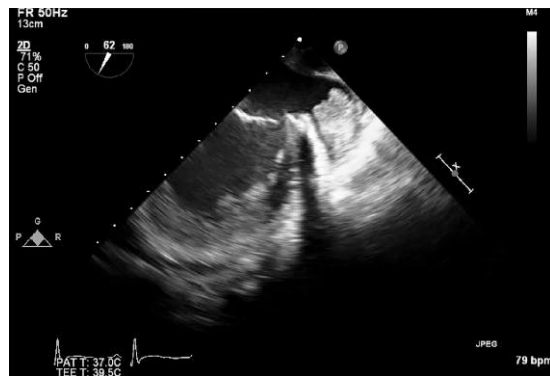
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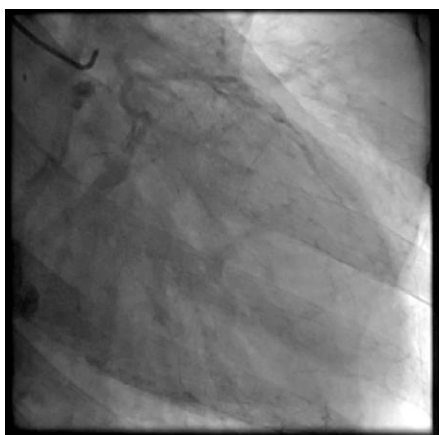
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Video 1 Echocardiography



Video 3 Transesophageal echocardiography



Video 2 Coronary angiography

left atrial (LA) branch (see [Supplementary material online, Figure D](#), arrow). Thereafter primary revascularization of the LAD was accomplished, and emergency coronary artery bypass grafting (CABG) was planned. Pre-surgical contrast-enhanced computed tomography (CT) incidentally detected a thrombus in the left atrial appendage (LAA) (see [Supplementary material online, Figure E](#)). Transesophageal echocardiography showed impaired LAA contractility (see [Supplementary](#)

[material online, Figure F](#), left: thrombus, right: LAA emptying velocity; [Video 3](#)). Left atrial appendectomy was performed concomitantly with CABG (see [Supplementary material online, Figure G](#)). Histological analysis revealed colliquative myocytolysis in the subendocardium of the LAA, indicating acute ischaemia (*Panel A*: low-power field of Azan stain, arrowhead: thrombus, *yellow square*: high-power field, asterisks: area of colliquative myocytolysis). Post-operative CT confirmed the recovery of LA branch flow (*Panel B*: arrow, LA branch). Our case demonstrates that LA ischaemia owing to impaired LA branch perfusion could be a rare mechanism for thrombus formation during normal cardiac rhythm.

Supplementary material

[Supplementary material](#) is available at *European Heart Journal – Case Reports*

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