Full pattern of transient apical ballooning of the left ventricle triggered by minor myocardial infarction

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Figure 1. Electrocardiographic (A) and angiographic findings (B-D) two hours after the onset of pain in a patient with subtotal occlusion of a small marginal side-branch (B; arrow) and full pattern of apical ballooning (D; arrows).

Figure 2. Magnetic resonance imaging five hours after presentation (A and B) and after seven days (C and D) showed recovery of left ventricular function and the presence of a focal scar in the lateral region (D; arrow in insert).

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A 60-year-old female with a history of hypertension, hypercholesterolaemia, and diabetes mellitus presented two hours after sudden onset of severe persistent chest pain. Electrocardiography showed ST-segment elevation in the inferolateral leads (figure 1A). Coronary angiography revealed a subtotal occlusion of a small left marginal side branch (figure 1B; arrow) and a normal right coronary artery, which could not explain the full typical pattern of apical ballooning as demonstrated by left ventricular angiography (figure 1C and D; arrows). At presentation, troponin I was slightly elevated (0.70 µg/l) while the creatine kinase was normal (maximum levels were 14.50 µg/l and 828 U/l, respectively).

Five hours after presentation, magnetic resonance imaging (figures 2A and B) showed apical ballooning (arrows) but no scar. Seven days later, the left ventricular function had recovered (figures 2C and D) but gadolinium-delayed enhancement indicated a focal scar in the lateral region (figure 2D; arrow in insert).

Transient apical ballooning of the left ventricle – also called takotsubo cardiomyopathy – mimics serious acute coronary syndromes with severe chest pain and electrocardiographic changes ranging from ST-

segment elevation to T-wave inversion. The syndrome is triggered by extreme physical exertion or excessive mental stress and has been related to stroke, asthma, pneumonia, metabolic and endocrinological disorders, and surgery.¹⁻⁴

In the present case, we searched for triggers of this rare syndrome and only found a small myocardial infarction that resulted from the distal occlusion of a coronary branch. We are not aware of a previous publication that has described a full pattern of apical ballooning being triggered by a very focal myocardial necrosis. ■

In this section a remarkable ‘image’ is presented and a short comment is given.

We invite you to send in images (in triplicate) with a short comment (one page at the most) to Bohn Stafleu van Loghum, PO Box 246, 3990 GA Houten, e-mail: l.jagers@bsl.nl.

‘Moving images’ are also welcomed and (after acceptance) will be published as a Web Site Feature and shown on our website: www.cardiologie.nl

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References

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