Interventricular septum haematoma with right ventricle obstruction caused by percutaneous coronary intervention: case report

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Description

Chronic total occlusion (CTO) of coronary artery is a common finding on diagnostic coronary angiography. Opening of the occluded artery remains one of the major challenges for interventional cardiologists. We present a case of CTO opening in a 55-year-old patient complicated by large haematoma of interventricular septum narrowing the lumen of right ventricle.

After the opening of left anterior descending (LAD) artery and the balloon angioplasty of LAD and of proximal part of perforator contrast injection revealed intramural haematoma in interventricular septum (Slide A). Transthoracic echocardiography showed severely thickened interventricular septum with two oval-shaped hypoechochogenic structures (Slide B). Thickened septum obstructed the lumen of the right ventricle. In continuous wave Doppler examination intraventricular gradient of 14 mmHg was recorded (Slide C). Although systemic hypotension presented by the patient might be the consequence of decreased the left ventricle ejection fraction after the procedure (from 60 to 40%), its most probable mechanism consisted in right ventricle failure (clinically jugular veins dilation and lack of pulmonary congestion were found). This is why the patient was given intravenous fluids with a good response. After 1 month reduction in intraventricular septum thickness was observed (Slide D), hypotension was no longer present. Although the introduction of enhanced guidewires combined with increasing operator experience and novel technical strategies have significantly reduced the number of CTOs that should be considered unapproachable, the risk of haemodynamically significant complications should always be kept in mind. After CTO opening standard echocardiographic examination might be useful to visualize the consequences of periprocedural complications, even not evident during the procedure (see Supplementary data online, Video S1).

Supplementary data

Supplementary data are available at European Journal of Echocardiography online.