What also is needed is to improve the way we use known and established therapies, says Dr Merz. The ‘Get with the Guidelines’ programme in the USA is one example of maximizing the use of existing therapies to close the sex and gender gaps in CVD. ‘What we’ve been able to demonstrate is that when you enforce guidelines, the lives that you save are female lives’, she says. ‘Women are much less likely to be treated with guideline therapy I think because of these diagnostic uncertainties. If you just do guidelines women get the treatment that we already know works’.

Helen Jaques, freelance medical writer and editor

References
The list of references is available in the online version of this paper.

An unusual interventricular communication after acute myocardial infarction

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Case report
An 82-year-old woman was admitted to our hospital with a 9-day history of intermittent chest pain. Electrocardiography showed abnormal Q waves in leads II, III, and aVF and ST-segment elevation in leads II, III, aVF, V₄, V₅, and V₆ (Panel A). Echocardiography showed not only inferoposterior wall akinesis but also an intramyocardial tunnel in the posterior wall, where a turbulent systolic jet entered from the left ventricular (LV) endocardium and exited to the right ventricular (RV) cavity. Notably, the interventricular communication was found via the intramyocardial tunnel of the posterior wall but not via the ventricular septum (Panel B; see Supplementary material online, Movie S1). Right coronary angiography demonstrated mid-vessel occlusion without collateral supply (see Supplementary material online, Movie S2). On enhanced computed tomography and left ventriculography, we found the intramyocardial tunnel at the mid-ventricular level (Panels C and D, white arrows) and subsequent enhancement of RV cavity (red and blue arrows indicate the beginning and ending of the tunnel, respectively). Emergent surgical repair was planned; however, her haemodynamics progressively deteriorated, resulting in death, despite intensive treatment including percutaneous coronary intervention, intra-aortic balloon pumping, and maximum inotropic support. An autopsy confirmed that the intramyocardial tunnel (white arrows) in the mid-myocardium bridged LV and RV with an unruptured ventricular septum (Panels E and F).

Although an interventricular communication is occasionally encountered in patients with acute myocardial infarction, this is the first case without ventricular septal defect. In the helical ventricular myocardial band concept, the LV free wall consists of three layers at the mid-ventricular level. This intramyocardial dissection may have progressed along circumferential myofibers rather than along transmural myocardial necrosis in accordance with the wave-front phenomenon.

Supplementary material is available at European Heart Journal online.

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