

Michel Oberson^a, Stavros Kosmidis^a,
Felix Mahler^a, Mario Alerci^b, Rolf Wyttenbach^b,
Paolo Tutta^a, Fabio Sartori^a, Augusto Gallino^a

^a Divisions of Cardiovascular Medicine,
Ospedale San Giovanni, Bellinzona

^b Radiology,
Ospedale San Giovanni,
Bellinzona

Coronary fibromuscular dysplasia: an elusive diagnosis

Case report

A 46-year-old woman with a history of typical chest pain at rest four weeks before admission, was referred by her general practitioner because of the presence of inverted T-waves (in V₃–V₅) (fig. 1). Cardiac enzymes, D-dimer and CRP values, were in the normal range. No atherosclerotic risk factors were present.

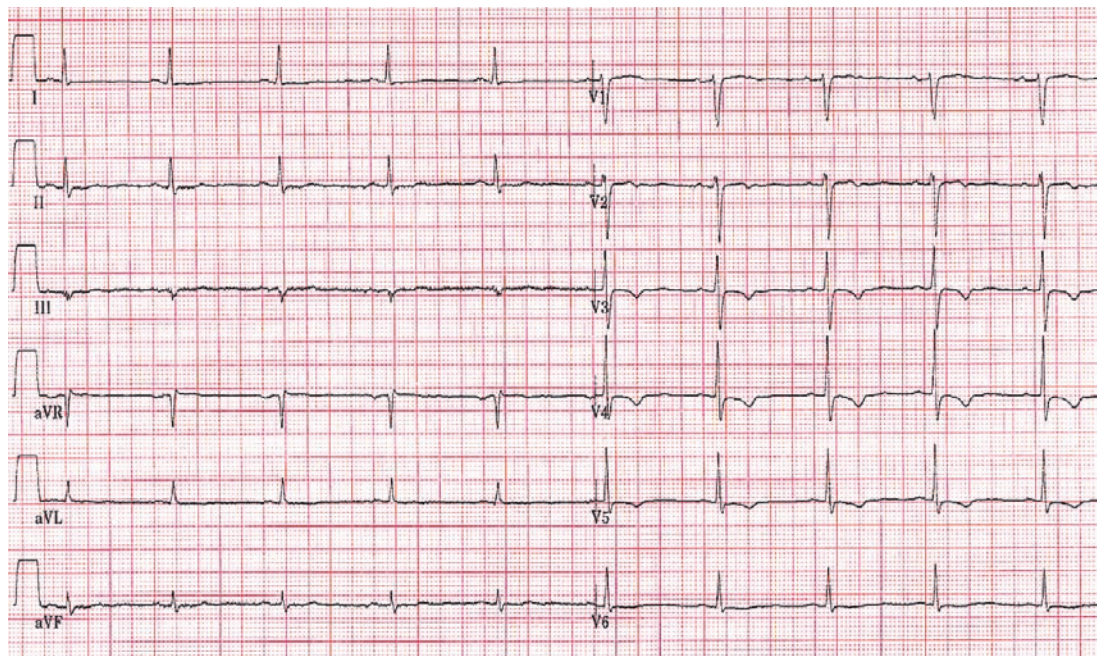
Coronary angiography showed an isolated (1–1–1 smooth) 60% lesion at the bifurcation of the third diagonal branch of the LAD (fig. 2). Selective angiography of the renal arteries performed during the same invasive procedure, showed the typical pattern of FMD with “string of beads” appearance of the right renal artery (fig. 3).

Cardiac-MRI indicated a small area of delayed enhancement compatible with a previous small antero-septal non-transmural myocardial infarction (fig. 4) with no evidence of residual myocardial ischaemia during adenosine perfusion.

Given the association of a single distal lesion of the LAD and the typical pattern of renal FMD, as well as the lack of risk factors, we postulated the tentative diagnosis of coronary FMD, although concomitant “trivial” coronary atherosclerosis cannot be completely excluded.

Figure 1

ECG with T-wave inversion in the leads V₃–V₅ suspected to be related to a recent non-transmural myocardial injury.



There is no conflict
of interest.

Correspondence:
Prof. Dr. med. Augusto Gallino
Cardiology Department
Ospedale San Giovanni
CH-6500 Bellinzona
E-Mail: agallino@bluewin.ch

Discussion

Fibromuscular dysplasia (FMD) is a disorder that generally affects the renal arteries. Involvement of FMD occurs less often in other arterial territories such as carotid, subclavian, iliac or mesenteric arteries. Involvement of the coronary arteries is extremely rare.

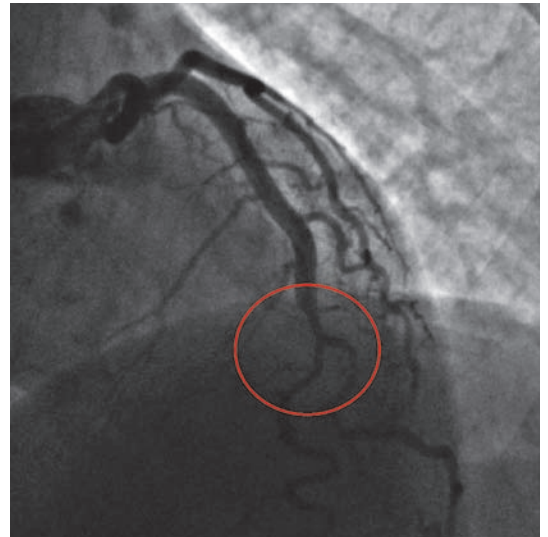


Figure 2

Coronary angiography illustrates a single 60% lesion at the bifurcation of the third diagonal branch of the LAD.



Figure 3

Digital subtraction angiography showing the classic "string of beads" appearance located at the middle portion of the right renal artery.

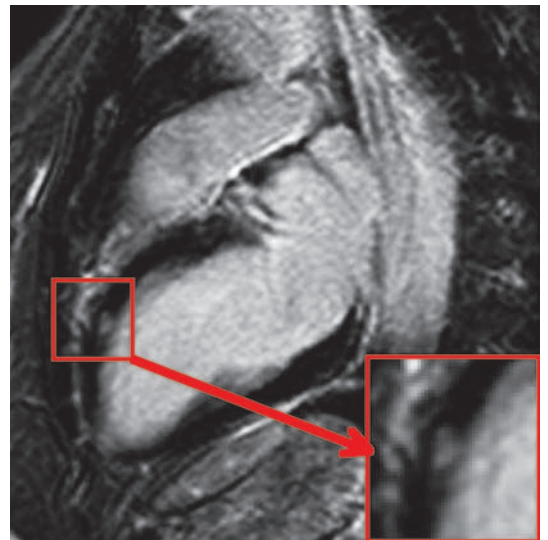


Figure 4

Cardiac-MRI indicated a small area of delayed enhancement compatible with a previous small antero-septal non-transmural myocardial infarction.