Clinical Features of a Case with Syndrome X

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Case Report(s)

A female patient aged 52 years old showed up in our clinics complaining of restrosternal chest pain, palpitations and profuse sweating. Her complaints started several days prior to the medical visit, and such problems persisted even during rest, but aggravated during physical effort.

The patient referred an episode of atrial fibrillation three years before, which obliged her to perform an emergent hospitalization. At that period the episode of atrial fibrillation was converted through oral amiodarone therapy; thereafter she was under continuous oral therapy with aspirin 100 milligrams daily and bisoprolol 5 milligrams daily. No drug adverse effects were reported and no allergies as well; she did not presented any other major cardiac risk factor (her history was negative for hypertension, diabetes, hyperlipidemia). The patient was not a smoker and no genetic history for ischemic cardiac disease was reported. The only major medical problem referred was a hysterectomy performed ten years before the present episode.

Upon admission the patient had a body temperature of 36.8 Celsius degrees; normally coloured skin and mucosal surfaces, fully alert and active. A systolic click was auscultated; no pericardial fremisement was present, heart rate was 68 beats per minute, arterial pressure values were 110 and 70 millimetres Hg. Vesicular respiration was auscultated in all pulmonary fields. Abdominal region was palpable and no enlargement of internal viscera was seen. Kidneys resulted clinically normal and lower extremities presented no dependent oedemas; peripheral pulses were fully palpable. No bruits were auscultated over carotid arteries bilaterally and jugular veins were within normality.

Laboratory data resulted as well without significant changes from normal ranges. Negative T waves were registered on the electrocardiography in the derivations II, III and aVF.

Based upon the above mentioned clinical data the treating clinician made a differential diagnosis in between the (a) mitral valve prolapse; (b) unstable angina and (c) syndrome X

Mitral valve prolapse is one of the most common cardiac valve anomalies; previously an incidence of 5-10% in the population was referred [1]. However, after more precise and detailed criteria were elaborated, a smaller incidence of the mitral valve prolapse in the population was referred; such an incidence was rather of 2.4% [2, 3]. The mitral valve prolapse seems twice more frequent in males rather than in females.

In the present case, mitral valve prolapse was excluded after normal echography data were collected. A stress test was thereafter registered (Figure 1).

The stress test resulted positive for coronary artery disease, with effort angina due to the depressions of S-T segment registered in the V5-V6 derivations; such depressions peaked to 1-2 millimetres. Abnormal blood pressure responding was as well registered during effort, with hypotension at the maximum of effort. No rhythm abnormalities, no conduction disorders was seen, with an overall good exercising ability.

Under these circumstances, the diagnosis was still pending between an unstable angina and syndrome X.

Unstable angina is defined as chest pain characterized through a decrease in the coronary blood flow, due to rupture of an atherosclerotic plaque, causing thereafter a partial thrombotic obstruction or embolism [4]. Such a picture should be accompanied from at least one the following:

1. Initiation during rest or minimal physical effort and lasting more than twenty minutes (when no nitrates are administered);
2. The pain has important consistence, since several days (during a single month);
3. The pain has an aggravating nature, i.e. it is increasing in intensity, or the painful periods are longer and more frequent than previously [1, 5].

Half of the patients with unstable angina, especially those suffering from prolonged chest pain during rest, will at the end present myocardial necrosis, whose presence is proved from an increasing of cardiac enzymes plasmatic levels, together with troponin T, I and CK-MB. Under these circumstances the diagnosis of a myocardial infarction without ST elevation is warranted.

Syndrome X is defined as an anginal pain with normal coronarography findings; such a syndrome is an important clinical entity that has to be differentiated from an ischemic heart disease due to coronary atherosclerosis. The prognosis of the syndrome X is
as a rule excellent [6, 7]. Such a prognosis is obviously different in patients with angina due to coronary atherosclerosis. Patients with anginal pain and normal coronary angiography compose 10-20% of all patients that undergo such a diagnostic procedure, due to clinical suspicion for ischemic heart disease. The causes of this syndrome are supposed to be:

1. Microvascular dysfunction or coronary spasm, leading to myocardial ischemia [8, 9];
2. Abnormal pain perception in patients with increased sympathetic tone.

Our patient thereafter performed a coronary angiography (Figure 2).

No significant coronary arteries stenosis was registered in the examination described above. Due to these findings, our patient was diagnosed with the syndrome X.

References

Illustrations

Illustration 1

Electrocardiographic findings during the stress test.

[Image of electrocardiogram]

Illustration 2

Coronarography phases imaging, without any significant stenosis.

[Images of coronary angiography]
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