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LEFT MAIN CORONARY ARTERY STENOSIS : STENTING OR SURGERY

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ABSTRACT

The stenosis of the unprotected left main coronary artery is the most severe coronary lesion. Rare cases of left main coronary artery angioplasty are described. In our context, we report a case of left main coronary artery angioplasty in a 77-year-old patient with tight stenosis. Our angioplasty was justified by the surgeon's challenge because of the severe systolic dysfunction of the left ventricle despite a high syntactic score of 33.

KEYWORDS: Coronary angioplasty, left main coronary artery, stent, Dakar.

INTRODUCTION

The stenosis of the unprotected left main coronary artery is the most severe coronary lesion in vital terms.[1] This condition remains extremely serious because of the risk of sudden death caused by sudden occlusion of the Left main artery by ventricular arrhythmia or cardiogenic shock and because of the large myocardial area involved.[1] Its incidence varies between 3% and 10% of all coronary angiography, and in 85% of cases, the Left main coronary artery is associated with a multi-joint disease.[1]

In 1988, in the guidelines of the American Association of Cardiology, the left main coronary artery was a contraindication to angioplasty.[2] Since that time, this is a very controversial topic on the therapeutic level. Ideally, the SYNTAX score is below 23, but patients whose SYNTAX score is between 23 and 30 can be dilated according to the surgical risk.[2]

OBSERVATION

This is a 77-year-old patient with a poorly monitored hypertensive patient who has had a history of pectoris angina during exercise since June 2016.

At admission, the general condition was preserved with 135/80 mmHg of blood pressure in both arms, the heart rate was 66 beats per minute and the examination found essentially an obesity android with a body mass index of 32 kg / m2.

The electrocardiogram showed apico-lateral epicardial ischemia with anterosal septal necrosis (Figure 1).

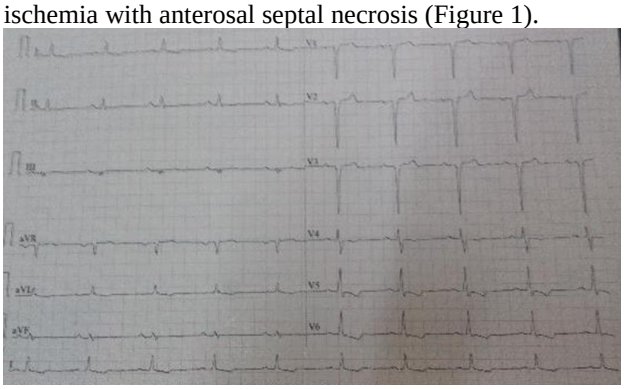

Figure 1: ECG showing apico-lateral epicardial ischemia with anterosal septal necrosis.

Transthoracic ultrasound revealed dilated cardiomyopathy with a left ventricular ejection fraction at 28% in the biplane Simpson.

Coronary angiography performed by the right femoral approach revealed a calcified left coronary network with very tight stenosis of the left main coronary artery, a tight lesion of the segment 1 of the left anterior descending (LAD) artery, an occlusion of the ostium of the circumflex artery (Cx) with a resumption by the ipsilateral network and finally a very small right coronary network, calcified with occlusion of the segment 2 and the resumption by the left network (figure 2). The syntax score was 33.

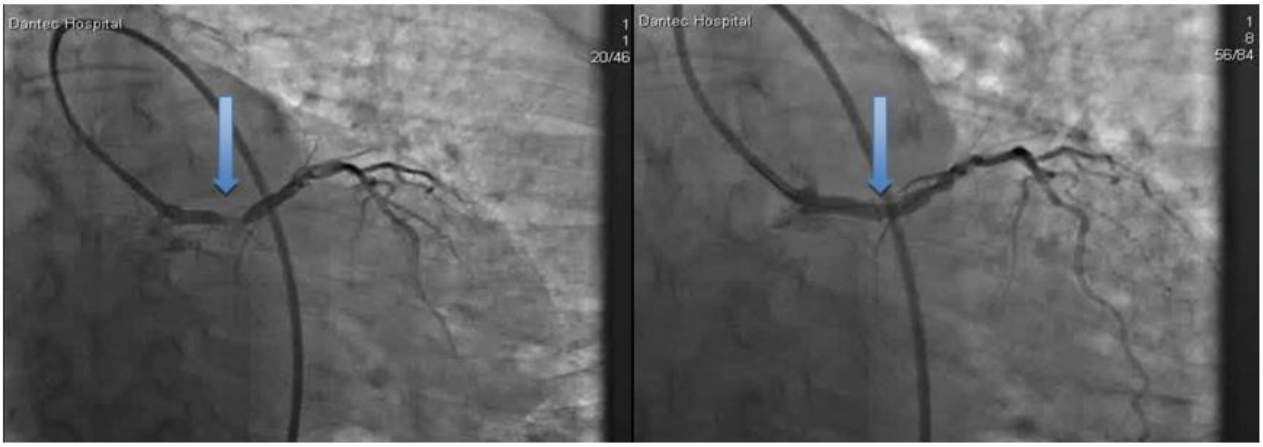

Figure 2: Images showing a calcified left coronary artery with a very narrow stenosis of the middle left main artery, a tight lesion of segment 1 of the LAD, an occlusion of the ostium of the circumflex artery (picture A), and final result of angioplasty with a good flow (picture B).

After a medical andsurgical staff, the patient was proposed for a surgical bypass but she was challenged because of the severe systolic dysfunction of the left ventricle. Angioplasty was performed in front of disabling force angina with 20 mm POWERLINE 3.0 balloon predilatation, deployed at 12 atmospheres for 15 seconds twice, followed by ORSIRO 3.5x18 mm drug electing stent(DES)deployment. at 18 atmospheres then at 22 atmospheres for 10 seconds with a good final result. We obtained a dissection-free recanalization with a TIMI III flow (Figure 2).

The outcome of the procedure was marked by cardiovascular collapse secondary to total hematuria, curbed by vascular filling with gelofusin and blood transfusion of iso-rhesus iso-group packed globular pellet pocket. She was released 7 days later with the disappearance of angina.

Short- and medium-term follow-up was favorable with the disappearance of angina and improvement of the left ventricular ejection fraction at 40%.

DISCUSSION

Left main artery stenosis is clinically most often demonstrated by exercise angina and diffuse ischemia of the antero-apical territory at the ECG.[1,2] Our patient had disabling stress angina and ischemia in the area prior to the electrocardiogram. In comparison, angioplasty and stenting of the common trunk in the literature[3] are burdened with a low 30-day mortality of 0-2% and a 2-15% year-on-year for good candidates Surgeryfor poor surgical candidates, common trunk stenting is burdened with a 30-day mortality of 0 to 12% and a year of 11 to 30%.

Park in Korea confirmed a good five-year (1996-2002) evolution of the inaugural series of 114 consecutive patients with tight stenosis of the unprotected core and a normal left ventricle. The success of the acute phase procedure is measured at 98% and the five-year survival is 95%, and the angiographic follow-up with a systematic coronarography at six months reveals a restenosis rate of 28%.[4] We had a success and a good end result in our case.

Medium-term follow-up is not detrimental to angioplasty and is even superimposable to that of surgery.[4] Collected in eleven French cardiology centers from 2001 to 2002.[5] 480 patients were the subject of a register published in September 2003 translating the real world, in the treatment of coronary heart disease. One hundred and ninety-two patients who received a stent in the common trunk were compared to 230 patients treated by bypass and 57 patients were subjected to drug treatment. The evolution at one month shows a clear advantage in terms of mortality (1.1% for stented patients compared to 6.9% for operated patients) and a low incidence of acute infarction (1.1% for patients stent versus 4.3% for operated patients). The one-year survival of the stented patients is comparable to that of the surgical group (mortality of 9.6% / 11.4%). Drug treatment gives an excess mortality of 21% at one month and 34% at one year. The higher rate of major cardiac events in stent patients is due to intrastent restenosis. For good candidates for surgery, the mortality of patients stented at one month is zero, acceptable in the surgical group (2.4%); the evolution at one year of stented patients remains favorable (mortality 2.2%) compared to the surgical group (9.8% at one year). In other words, this register offers a favorable place for the angioplasty of the left common area.

At the Washington Congress on September 16, 2003: The New Sirius Cypher Stent Rapamycin Stent Study Demonstrated an Intrastent Restenosis Rate Decreased to 3.1% (Compared to 42.7% in the Control Group de novo stenosis). The Taxus IV study also found a six-month intrastate restenosis rate reduced to 5.5% (compared to 24.4% in the control group). These promising results led to the application of the stent to rapamycin in a more

targeted manner to stenosis of the left common trunk. In our case, we used an ORSIRO active stent and we did not have restenosis after the angioplasty but the consequences of the procedure were marked by a cardiovascular collapse secondary to a hematuria curbed by the vascular filling with the gelofusin and blood transfusion of a globular pellet pocket. Three studies[6,7] offer encouraging preliminary results by Suarez with a restenosis rate of 4%, by Colombo in Milan with the need for a second revascularization in five out of twenty-eight stents, by Serruys in Rotterdam with a follow-up at nine months without death, without infarction and without any secondary revascularization. We did not have recourse to secondary revascularization in our patient and she did not have a heart attack. We proceeded to leave the service 7 days later after a good clinical evolution.

CONCLUSION

The stenosis of the common trunk is a new challenge of the interventional cardiologist, facing coronary surgery, in a way the last basile unshakeable. Common trunk stenting is technically feasible and should be positioned in the future as an alternative to coronary surgery in well-selected cases.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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