

# A Case of Middle Aged Women with Isolated Left Coronary ostial stenosis with Non ST Elevation Myocardial Infarction

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## Abstract:

**Background:** The stenosis of the ostial left anterior descending artery represents one of the challenges for the interventional cardiologist. In contrast ostial stenosis of the left main trunk shows very good results after percutaneous interventions and implantation of drug-eluting stents. The indications for percutaneous transluminal coronary angioplasty (PTCA) of an ostial lesion correspond to the indications for treatment of all other lesions.

**Case:** A-56-year-old woman was admitted to our hospital who was initially admitted in the intensive care unit for a severe acute chest pain. She had no coronary risk factors. No hormonal disorders were observed. Physical and laboratory examinations revealed that she had not suffered from syphilis or aortitis syndrome or any other inflammatory diseases. An electrocardiogram (ECG) was immediately performed and showed ST segment non elevation in the precordial leads (Figure 1) suggesting an acute anterior ST Non elevation myocardial infarction (NSTEMI). On coronary angiography, a 80% stenosis of the left coronary ostial stenosis was found, but no abnormality was found in other arterial trees. (Figure 2) The patient was diagnosed as having isolated coronary ostial stenosis.

**Conclusion:** The patients are almost always middle aged woman with no coronary risk factors. , the involved coronary artery is the left main coronary artery, so its obstruction results in a serious condition. Therefore, though its pathogenesis remains to be determined, isolated left coronary ostial stenosis seems to be a distinct clinical entity.

**Key words:** acute coronary syndrome; percutaneous interventions; isolated left coronary ostial stenosis

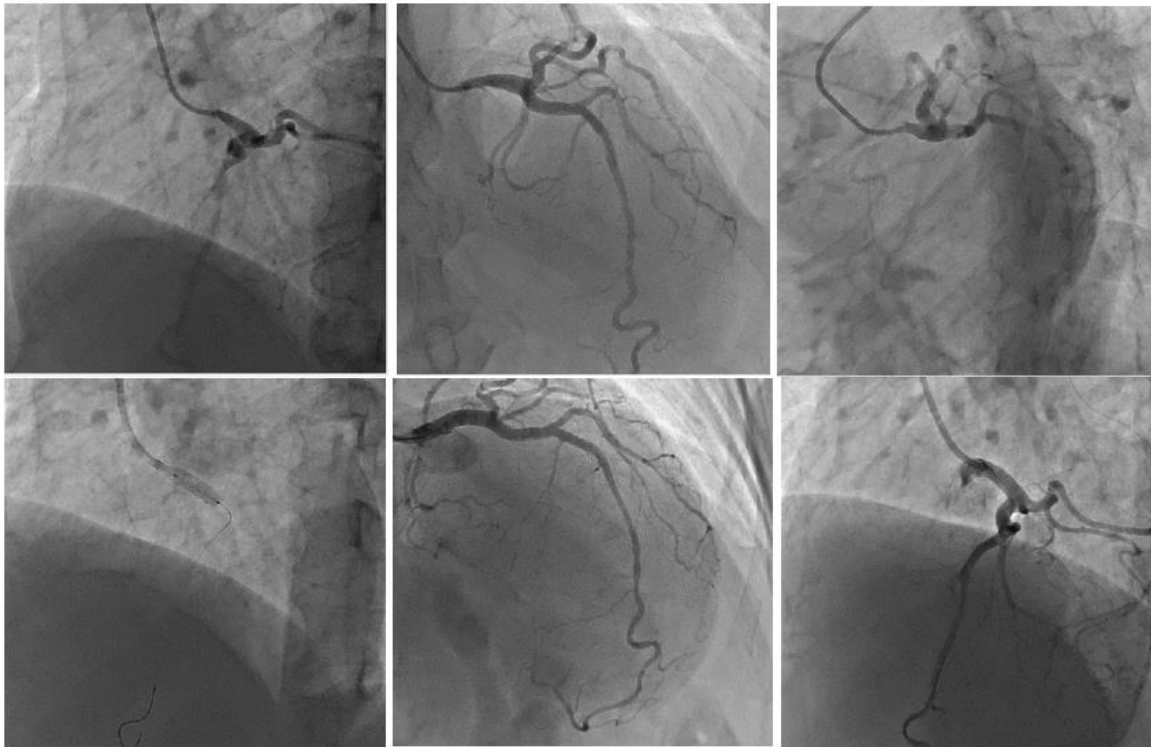
## Introduction:

An ostial lesion is defined as a lesion near to the ostium ( $\leq 3$  mm) and is characterized by a rigid fibrotic texture with pronounced sclerosis associated with a very high tendency to recoil. Under certain circumstances this may lead to a modest primary interventional result accompanied by a higher complication rate and in particular a higher rate of restenosis. Ostial lesions of the left coronary artery in particular represent a greater challenge for percutaneous interventions. We try to determine the characteristics of this clinical entity.

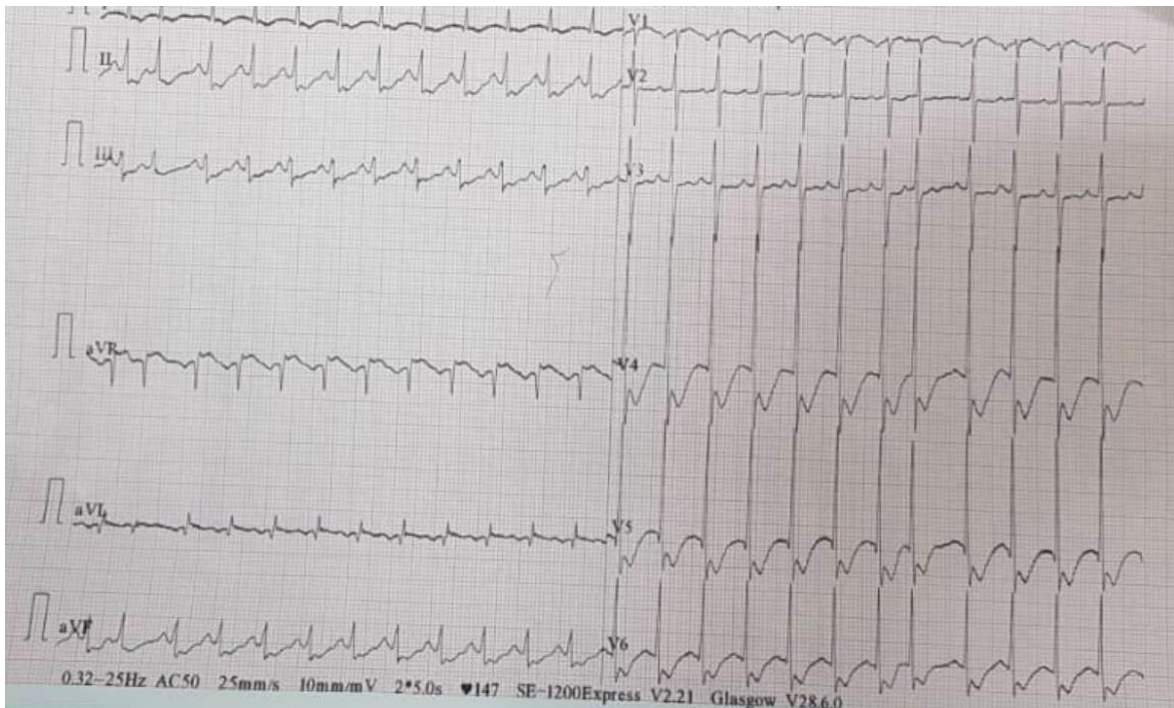
## Case presentation:

A-56-year-old woman was admitted to our hospital who was initially admitted in the intensive care unit for a severe acute chest pain. She had no coronary risk factors. No hormonal disorders were observed. Physical

and laboratory examinations revealed that she had not suffered from syphilis or aortitis syndrome or any other inflammatory diseases. An electrocardiogram (ECG) was immediately performed and showed ST segment non elevation in the precordial leads (Figure 1) suggesting an acute anterior ST Non elevation myocardial infarction (NSTEMI). Echocardiography showed an improved left ventricular ejection fraction (LVEF) of 55%. We initiated anti-thrombotic therapy including aspirin, clopidogrel and curative dose low molecular weight heparin Enoxaparin 1 mg/kg subcutaneous every 12 hours. On coronary angiography, a 80% stenosis of the left coronary ostial stenosis was found, but no abnormality was found in other arterial trees. (Figure 2) The patient was diagnosed as having isolated coronary ostial stenosis. After having injected risordan intra-coronary we eliminated the spastic origin of this stenosis. She underwent coronary percutaneous interventions and implementation of drug-eluting stents. She is now completely asymptomatic.



**Figure 1 :** coronary angiography, a 80% stenosis of the left coronary ostial stenosis After having injected risordan intra-coronary we eliminated the spastic origin of this stenosis.



**Figure 2 :** under-shift in the apical-lateral and in the inferior with an over-shift in the aVR.

**Discussion:**

An ostial lesion is defined as a lesion near to the ostium ( $\leq 3$  mm) and is characterized by a rigid fibrotic texture with pronounced sclerosis associated with a very high tendency to recoil. Under certain circumstances this may lead to a modest primary interventional result

accompanied by a higher complication rate and in particular a higher rate of restenosis. Ostial lesions of the right coronary artery in particular represent a greater challenge for percutaneous interventions with a higher rate of restenosis despite the introduction of various new techniques. In contrast ostial stenosis of the left main trunk shows very good results after

percutaneous interventions and implantation of drug-eluting stents. The indications for percutaneous transluminal coronary angioplasty (PTCA) of an ostial lesion correspond to the indications for treatment of all other lesions [1].

A review of the literature together with this patient reveals the following characteristics of patients with isolated coronary ostial stenosis. Firstly, the patients are almost always middle aged woman with no coronary risk factors. Secondly, the involved coronary artery is the left main coronary artery, so its obstruction results in a serious condition. Therefore, though its pathogenesis remains to be determined, isolated left coronary ostial stenosis seems to be a distinct clinical entity [2]. this results in a higher re stenosis rate in the treatment of ostial lesions compared with nonostial stenosis. In female patients In addition to coronary sclerosis of the proximal and ostial segments of the coronary vessels may be

Anterior irradiation or inflammatory aortitis (syphilis, Takaysu arteritis) should be considered as a differential diagnosis. Acutely, a aortic dissection, either spontaneously or in the course of percutaneous coronary intervention, to a narrowing/displacement of the ostium.

PCI for ostial/mid-shaft lesions, as compared to distal bifurcation lesions in Unprotected left main coronary artery (ULMCA), is associated with better clinical outcomes largely because of the lower need for repeat revascularization in ostial/mid-shaft lesions. [3]

The main immediate complication was acute occlusion of the circumflex artery ostium. After 12 months, the thrombosis and restenosis rates were 5,2% and 6,5%. Predictors of MACE were: Insulin-requiring diabetes( $p=0.05$ ), chronic renal failure( $p=0.02$ ), a low-pressure stent deployment( $p=0.01$ ), or the presence of signs of left ventricular failure ( $p<10^{-3}$ ). The predictive factors for stent thrombosis were the alteration of the left ventricular ejection fraction ( $p<0.01$ ) and the eccentricity of the lesion ( $p<10^{-3}$ ). Finally, the predictive factors of restenosis were: acute

per procedural occlusion of the ostial circumflex artery ( $p=0.01$ ) or the presence of an associated lesion of distal IVA ( $p<0.001$ ) [4].

### Conclusion:

A review of the literature together with this patient reveals the following characteristics of patients with isolated coronary ostial stenosis. Firstly, the patients are almost always middle aged woman with no coronary risk factors. Secondly, the involved coronary artery is the left main coronary artery, so its obstruction results in a serious condition. Therefore, though its pathogenesis remains to be determined, isolated left coronary ostial stenosis seems to be a distinct clinical entity.

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