# Immediate improvement of left internal thoracic artery graft flow after subclavian artery stenting

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**A b s t r a c t**

We report a case of treatment of subclavian-coronary steal syndrome with stenting and immediate improvement of left internal mammalian artery flow.

**Key words:** stenting, subclavian-coronary steal syndrome.

A 65-year-old man was admitted to the emergency department with chest and arm pain ongoing for one hour. He had a history of anterior myocardial infarction (MI) with coronary artery bypass graft (CABG) operation (left anterior descending artery (LAD) – left internal thoracic artery (ITA), left circumflex artery (LCX) – radial artery, and right coronary artery (RCA) – saphenous vein conduits), diabetes mellitus (DM) with oral medication, and hypertension (HT). On physical examination there was weakness of left arm pulse and lower left arm blood pressure (90/60 mm Hg, right arm blood pressure was 140/90 mm Hg). His electrocardiography (ECG) revealed old left bundle branch block (LBBB) (Sgarbossa criteria: 2 points) (Figure 1). His laboratory findings showed in-

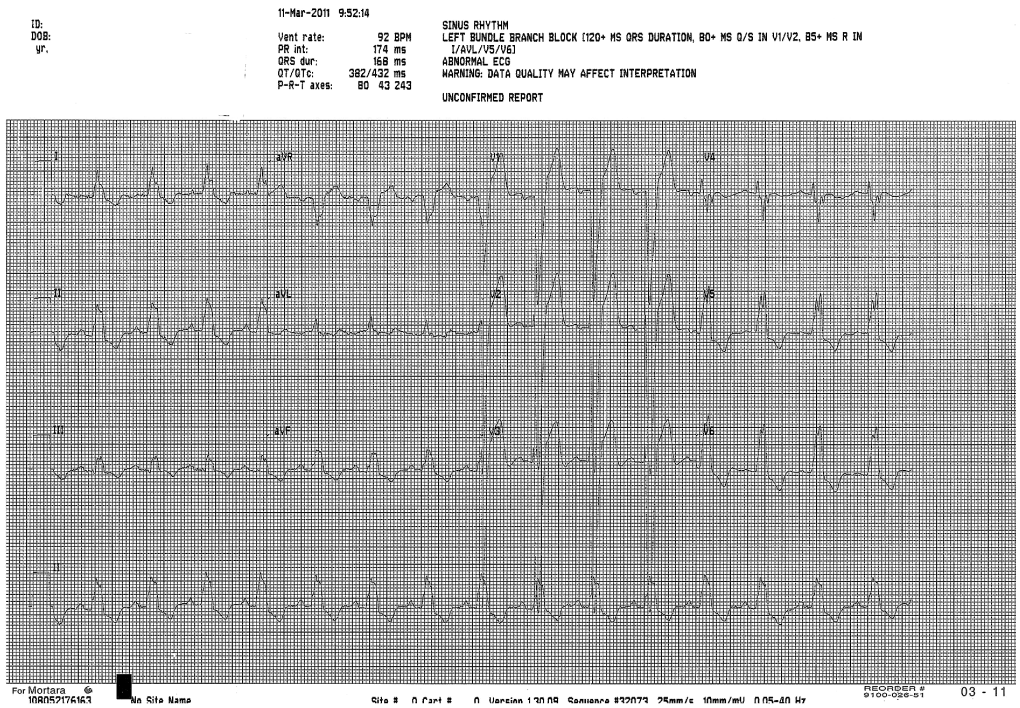


**Figure 1.** Electrocardiography of the patient on admission, demonstrating left bundle branch block (LBBB)

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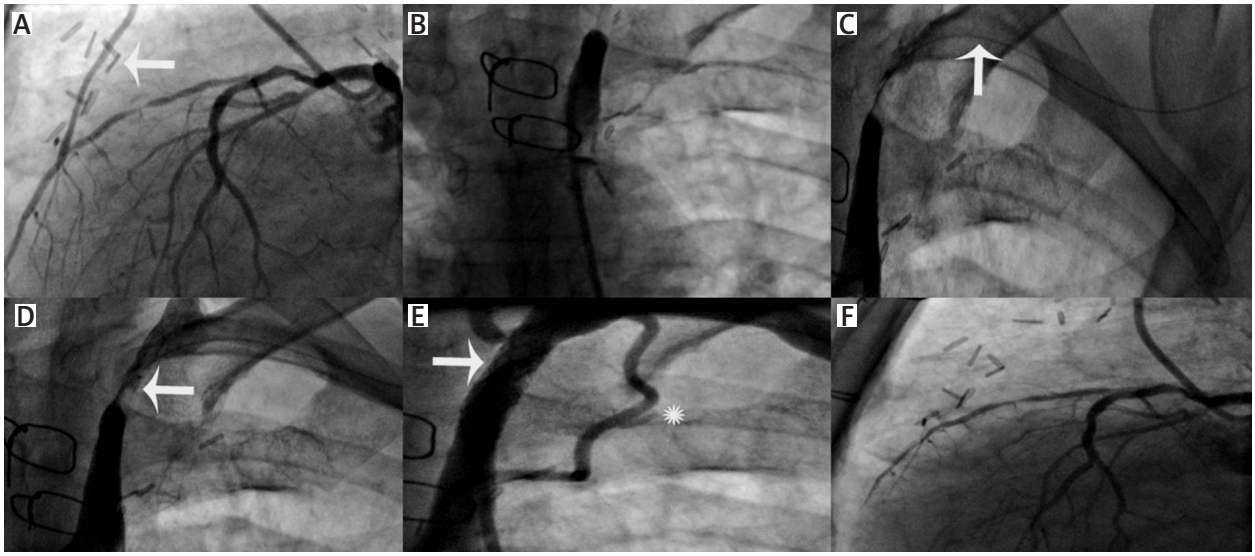


**Figure 2. A** – Retrograde flow of left internal thoracic artery (ITA) during left coronary angiography (arrow). **B** – Aortography shows 99% stenosis of left subclavian artery. **C** – Passing through the stenosis on the subclavian artery with a guidewire by the anterograde route (arrow). **D** – View of stenosis of left subclavian artery after balloon dilatation. **E** – Subclavian artery after stent implantation (arrow) and anterograde flow of left ITA (asterisk). **F** – Lack of retrograde flow of left ITA after left subclavian artery stenting

creased troponin, creatinine kinase MB (CK-MB), and CK levels (50 ng/dl (normal range: < 0.06 ng/dl), 132 U/l (normal range: < 40 U/l), 1095 U/l (normal range: < 250 U/l), respectively), serum haemoglobin level 15.9 g/dl, and serum creatinine level 0.97 mg/dl. He was diagnosed as non-ST elevation myocardial infarction. Coronary angiography revealed reversed flow through the left ITA conduit. Consequently, the patient was diagnosed as having coronary steal syndrome. Aortography showed 99% stenosis of the left subclavian artery. After passing through the lesion with a guidewire by the anterograde route, we performed balloon dilatation, and balloon-expandable stent implantation for stenotic lesion. During the same procedure, control coronary left angiography revealed improvement of ITA flow (Figures 2 A–F). The patient was discharged after 5 days with optimal medication.