

Percutaneous coronary intervention of RIMA

The real challenge!

Speaker's name:

I do not have any potential conflict of interest

76-year old woman

Previous History

Diabetes

Dislipidemia

Hypertension

Renal Insufficiency

NSTEMI 08.2013

- **Echocardiogram:** Good left systolic global ventricular function – 55%.

- An *immediate invasive strategy* was performed due to recurrent chest pain > **Severe coronary disease:** 3 vessels disease including left main disease.

- She was stabilized with **intra-aortic balloon pump** until CABG.

CABG:

- RIMA to left anterior descending artery (LAD); LIMA to obtuse marginal.

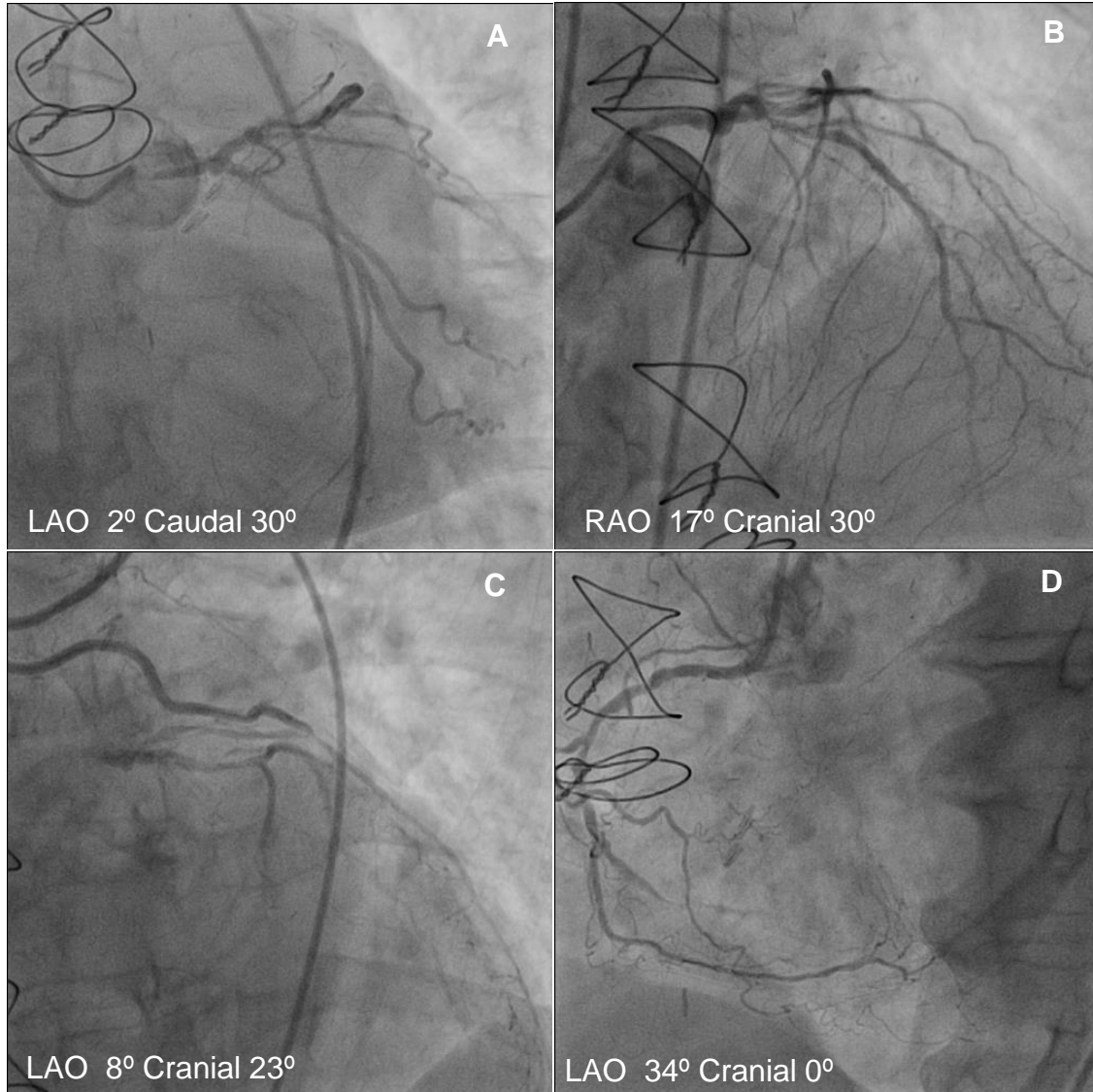
- No intercurrences after surgery.

Actual Disease

Hospital readmission **11.2013**
Due to **Post – CABG Angina.**

Coronariography:

- Left main stem 90% stenosis;
- Proximal left anterior descending artery (LAD) 90% stenosis;
- First obtuse marginal (OM1) 50% stenosis;
- Anastomosis of RIMA to LAD with 70% stenosis;
- Anastomosis of LIMA to OM1 with 50-70% stenosis;
- Distal right coronary artery with subocclusive lesion.



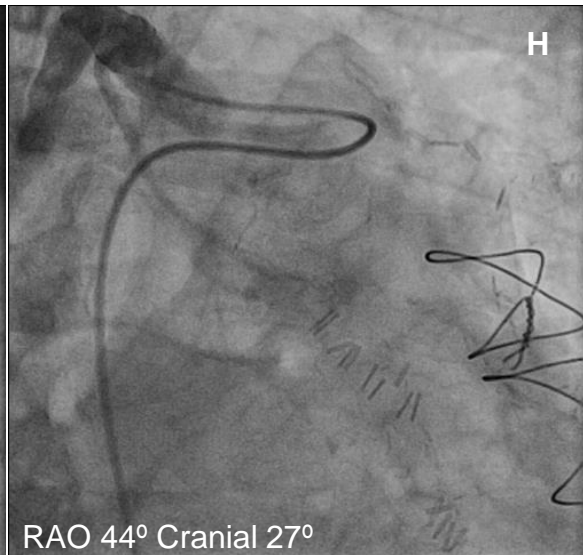
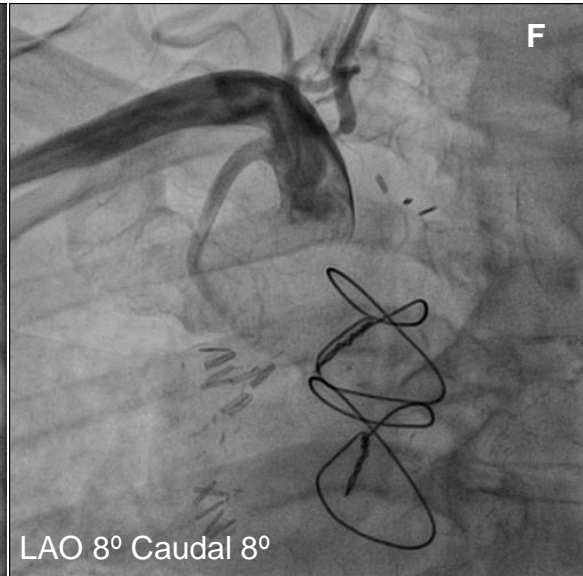
Description:

Figure A - severe left main stem disease;

Figure B – Left anterior descending artery with severe proximal disease;

Figure C – Anastomosis of LIMA to obtuse marginal with 50-70% stenosis;

Figure D – Right coronary artery with subocclusive distal disease.



Description:

Figure E – Diagnosis catheter documenting severe disease on the anastomosis of RIMA to LAD.

- Selective catheterization of RIMA with PCI catheter was unsuccessful due to subclavian artery tortuosity, either by radial or femoral access, despite all the catheters used (LCB 6F; AR1 6F; EBU 6F; JL 3 6F; IM 6F; MPA 1 6F). **Figures E and F** - radial access; **G and H** femoral access.



It was decided to **optimize medical treatment** and maintain clinical surveillance.



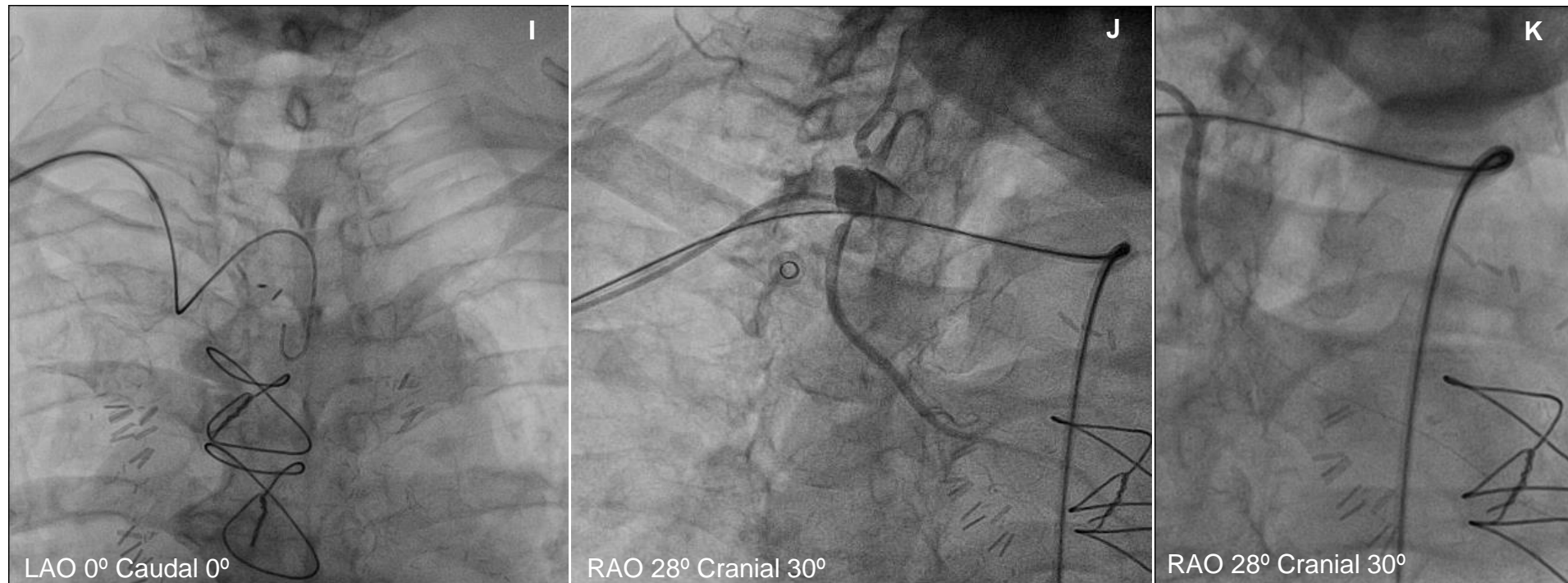
She was **discharged asymptomatic** with optimized medical treatment.

Technique used to allow RIMA selective catheterization of

New hospital admission 12.2013 due to **Unstable Angina**



It was tempted again PCI of the anastomosis on the RIMA.



Description:

Figure I - Severe subclavian tortuosity (radial access). **Figure J** - It was performed a double access – femoral and radial with a stiff wire in the catheter of the femoral access. **Figure H** - Stretching the subclavian, allowed selective catheterization of the ostium of RIMA with IM 6F catheter, through braquial access

PCI of the RIMA anastomosis lesion



Description:

Figure L – RIMA treated with balloon angioplasty.

Figure J – Good final result of PCI.

Myocardial perfusion
scintigraphy (08-2014)

Inferior and lateral necrosis. Mild ischemia in basal portion of anterior wall.

Transthoracic
echocardiography
(10-2014)

Left systolic dysfunction (EF 45%), akinesia in mid and basal segments of inferior wall and hypokinesia in mid and basal segments of posterior and lateral walls. Mild mitral insufficiency.

Our patient was under optimized medical treatment, in class II of NYHA , with stable angor - CCS I/II until **December 2014**, when she was **again readmitted with unstable angina**.

**Description:**

Figures N and O - Persistence of good result of previous PCI on the anastomosis of RIMA to LAD. **Figure P** - Lesion of 70-80% on the anastomosis of LIMA to obtuse marginal, treated with balloon angioplasty.

After that, our patient is in class II of NYHA, with stable angor - CCS I/II, without new hospital admissions.

Conclusion

Double artery access can be useful to allow catheterization of IMA artery in difficult anatomy.