

Successful Treatment Of Acute Coronary Occlusion Accompanied By A Giant Coronary Aneurysm By Implantation Of Multiple Covered Stents

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We do not have a financial interest or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.

Case

Patient: A 32-year-old woman

Complaint: Acute-onset chest pain

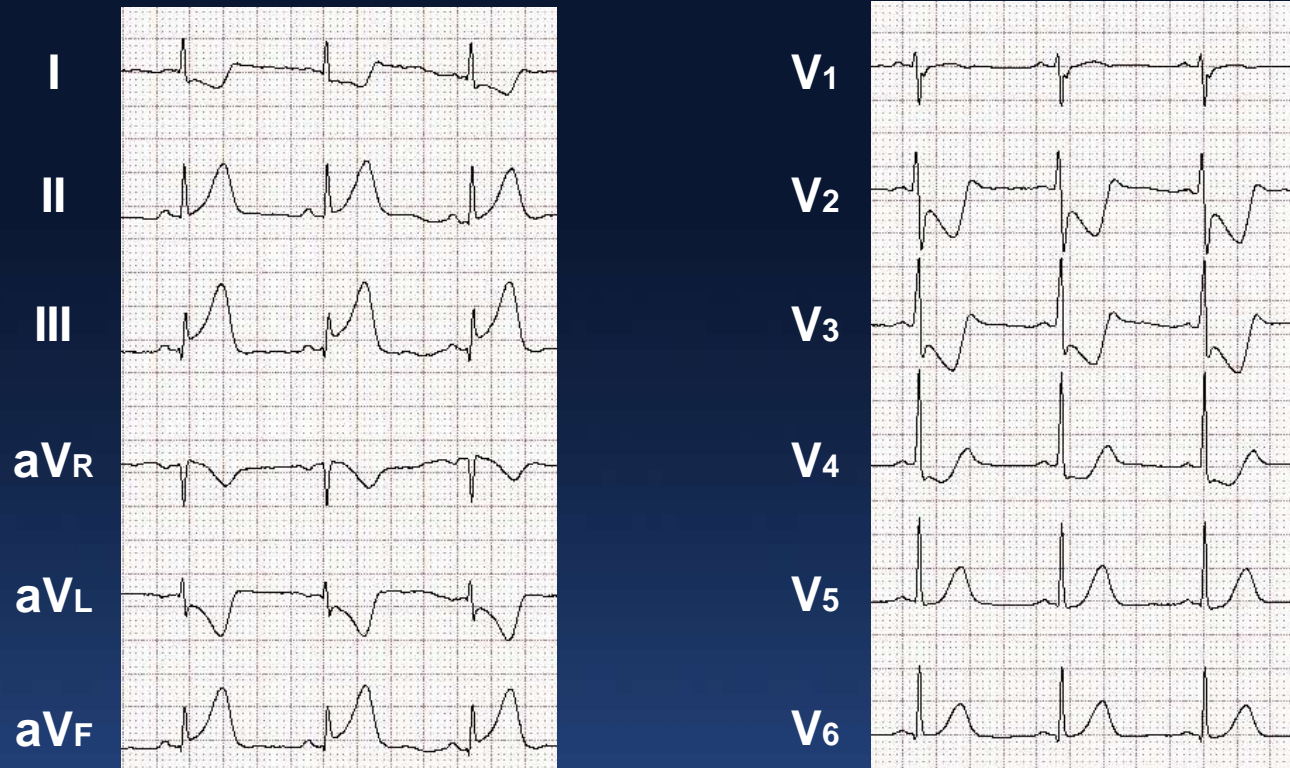
Previous illness: None

Coronary risk factor: None

Chest radiograph



ECG



UCG: LV asynergy of the inferior wall

Baseline angiogram

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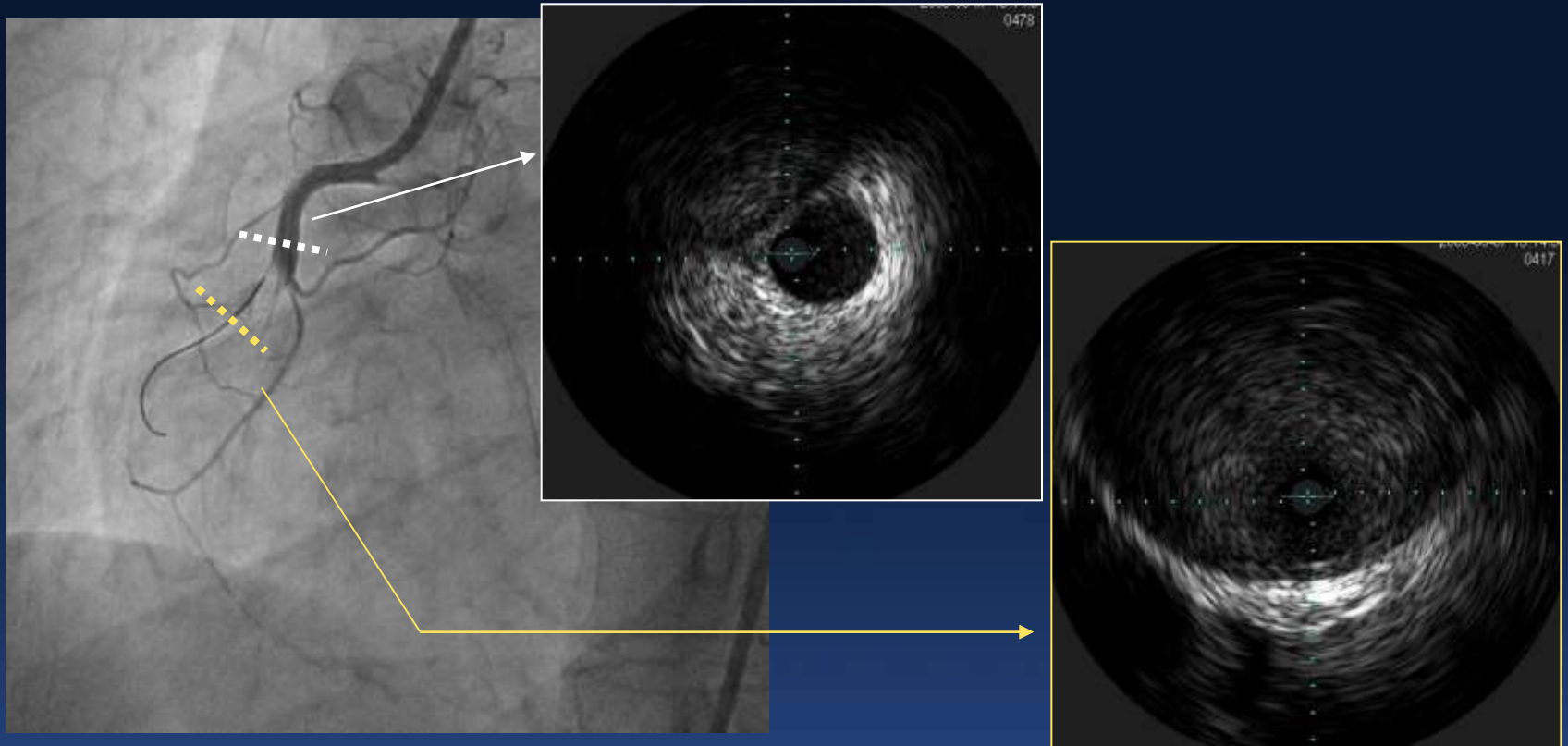
The emergent coronary angiography showed coronary occlusion in the proximal RCA. The distal RCA was slightly supplied by the LCA.

PCI to RCA

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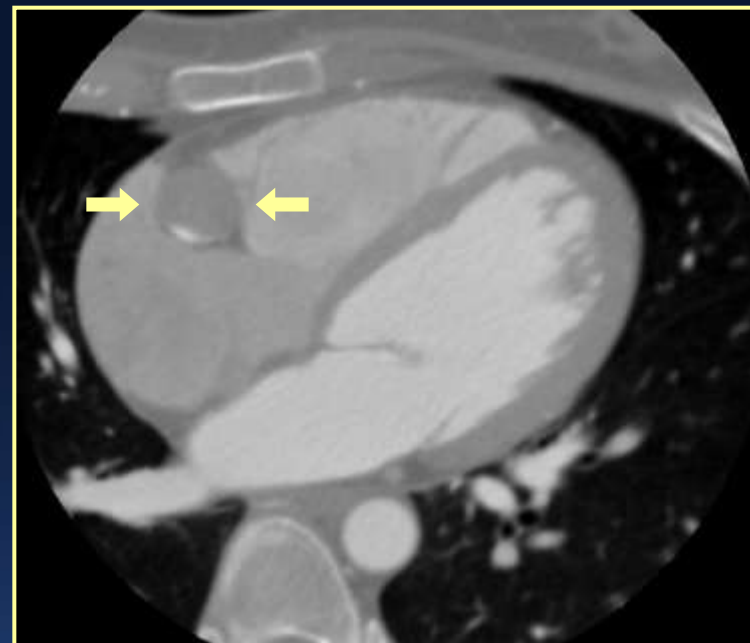
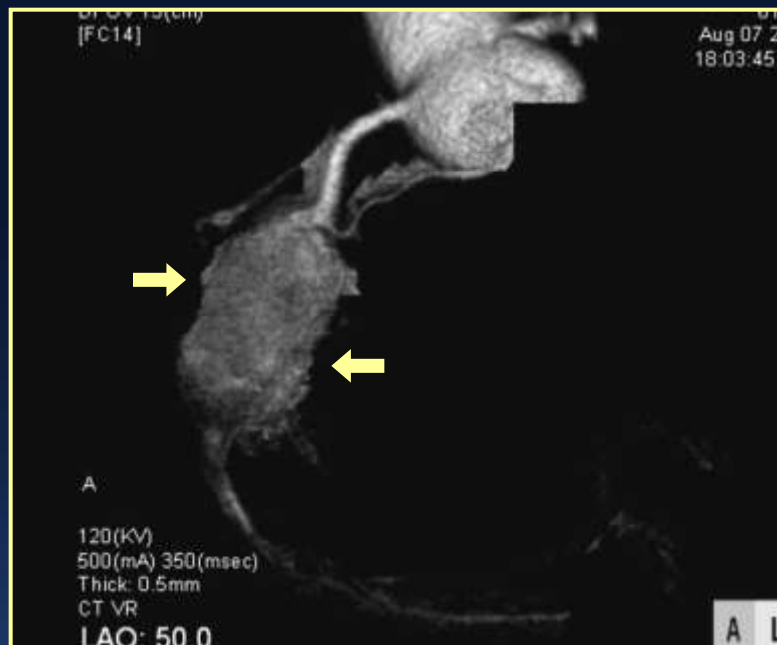
Since the primary diagnosis was acute myocardial infarction, we started PCI to the RCA. However, it was quite difficult to pass the guidewire through the lesion.

IVUS image



IVUS image revealed extraordinary dilatation of the vessel.

Coronary CT image



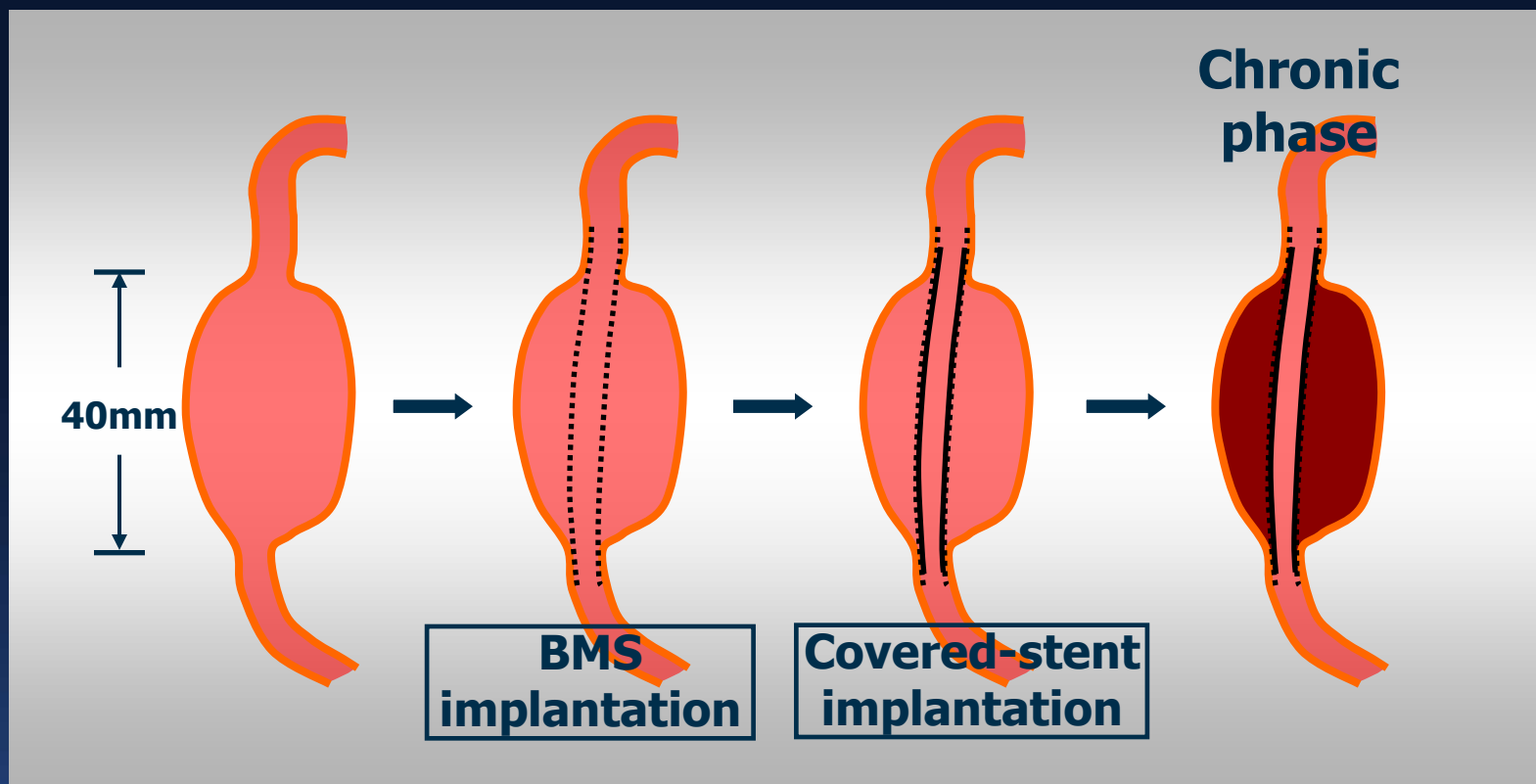
Coronary CT image revealed a giant coronary aneurysm (40 x 20mm) in the mid RCA.

PCI to RCA



**Thereafter, the procedure was resumed.
The guidewire was successfully passed through
the occluded large coronary aneurysm.**

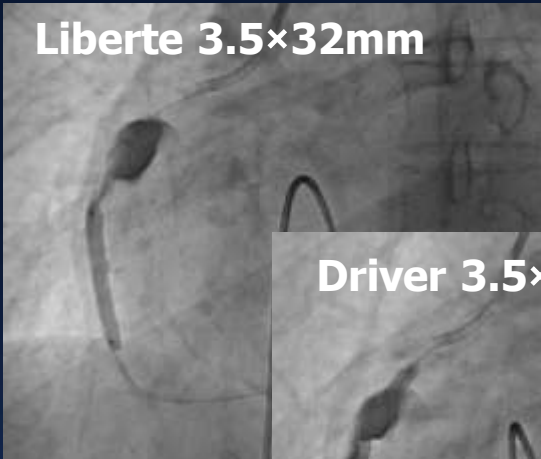
Stenting strategy



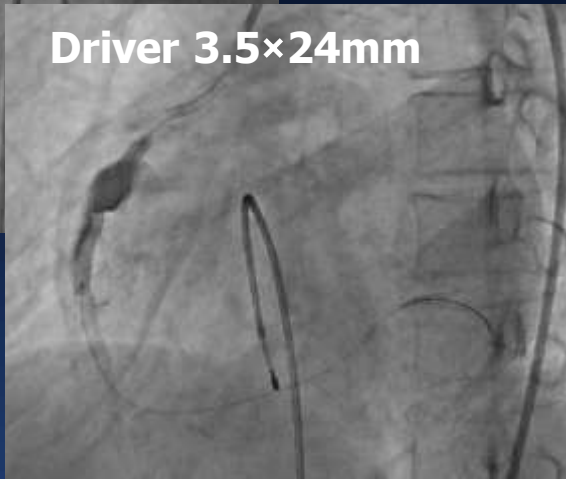
For maintaining good patency of the RCA and preventing endoleak, 3 covered stents were required to connect the proximal edge of the aneurysm to the distal one. To stabilize the multiple covered stents, oversized bare-metal stents (BMS) were implanted in advance as substitutes for the vessel wall.

BMS implantation

Liberte 3.5×32mm

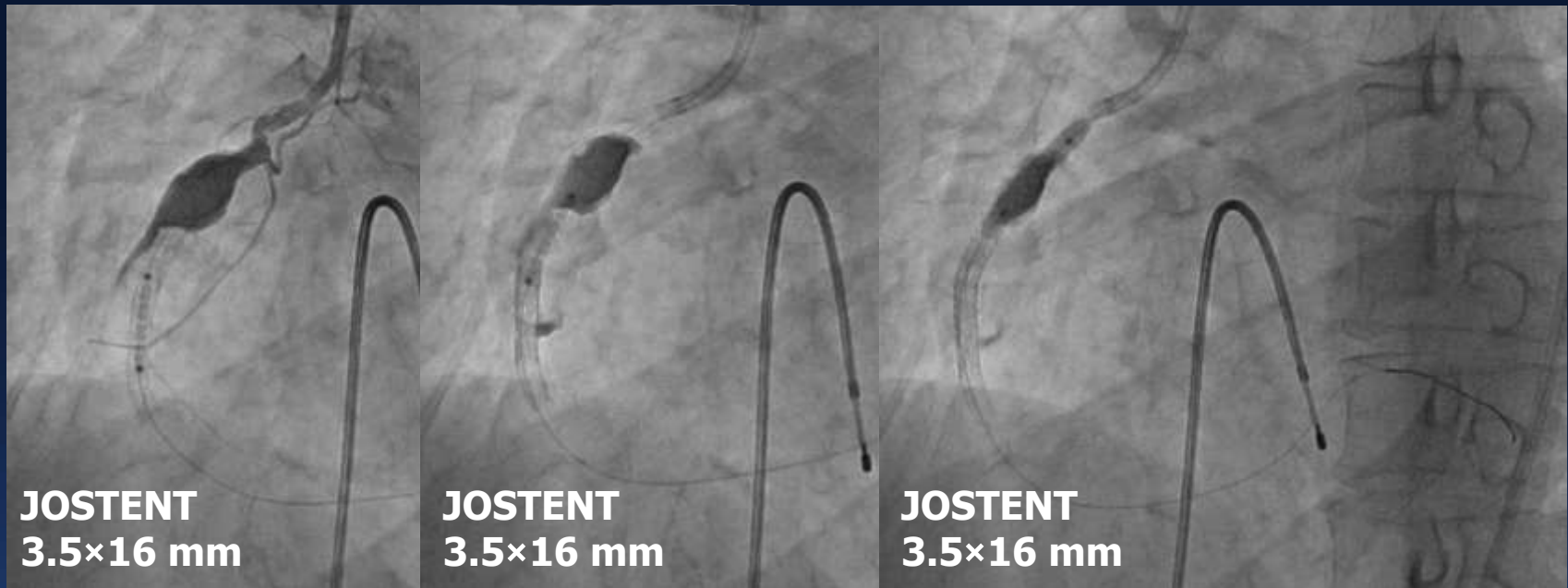


Driver 3.5×24mm



Two BMSs were implanted in advance as substitutes for the vessel wall. Good patency of the RCA was restored; however endoleak was still observed after BMS implantation.

Covered-stent implantation



Three covered stents were deployed inside the preimplanted BMSs. Optimal stent expansion was achieved after using a high-pressure balloon.

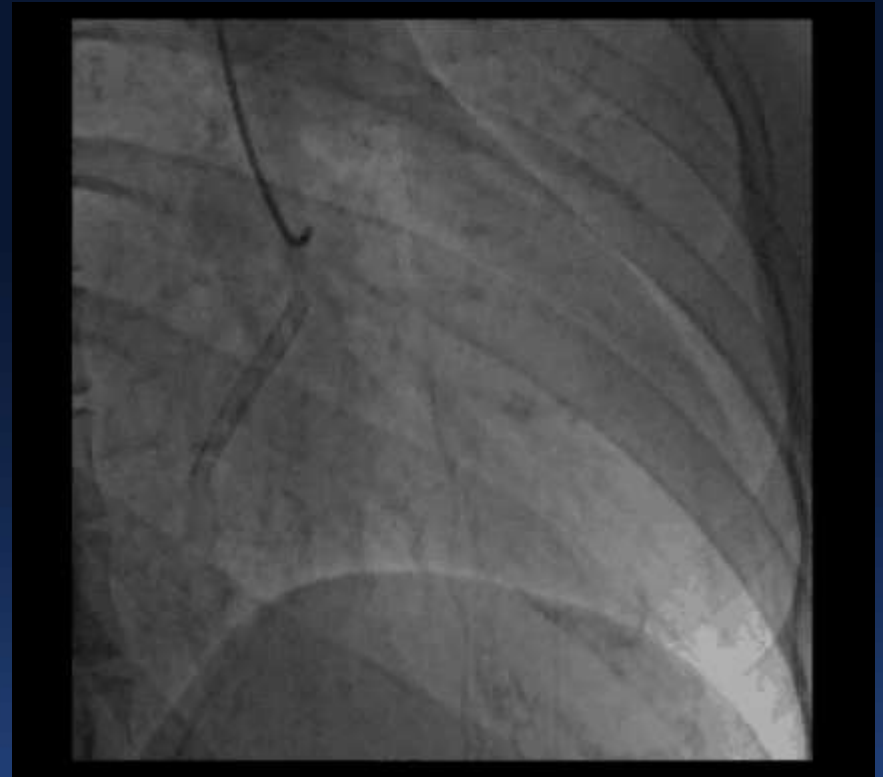
Final angiogram

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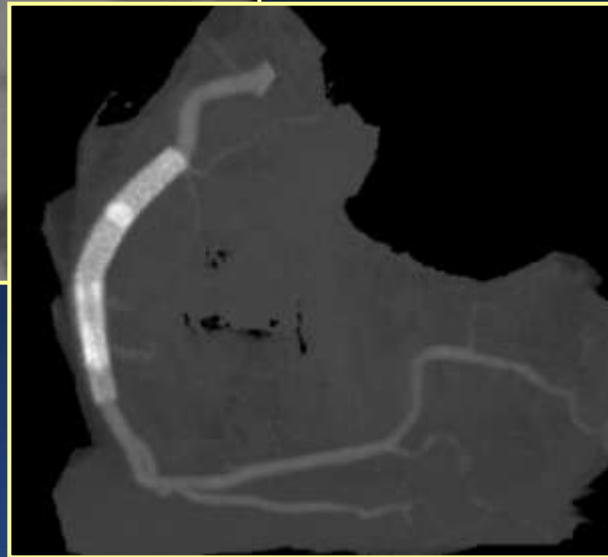
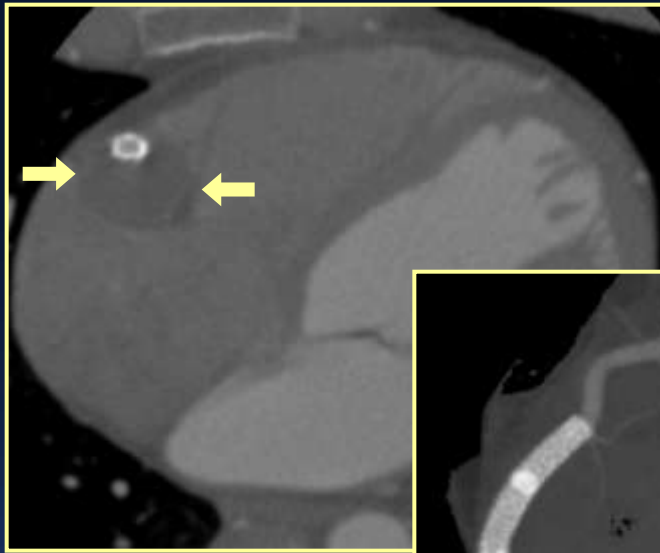
Good patency of the RCA was restored and the endoleak almost disappeared. After the procedure, oral aspirin and clopidogrel was administered.

6-Month follow-up



Coronary angiogram 6 months after the procedure showed good patency of the stent grafts with moderate intimal hyperplasia.

Follow-up CT image



Follow-up CT angiogram showed an organized aneurysm outside the stents.

Conclusion

- **Acute coronary occlusion accompanied by a giant aneurysm was successfully treated by implanting multiple covered stents.**
- **Coronary CT was quite helpful in the diagnosis and treatment of the coronary aneurysm.**
- **Long-term follow-up examination revealed that implantation of multiple covered stents after BMS implantation was useful in maintaining good patency and preventing endoleak.**

Thank you for your kind attention.

