22

PATIENT COMPLICATIONS OR COMPLICATED PATIENT?

Giuseppe Andò, Francesco Costa, Vittorio Virga, Francesco Saporito

Universita di Messina, AOU Policlinico "G. Martino", Messina

Rational: In a single patient with multiple and complex cardiovascular conditions, we were compelled to manage technical challenges and complications related to vascular access and bleeding, catheter navigation, coronary interventions in calcific lesions and cardioembolic stroke.

Technical resolution: Radial artery tortuosity was overcome by balloon-assisted tracking. Retroperitoneal (spontaneous ileopsoas hematoma) after femoral access was managed conservatively. Coronary perforation and tamponade were treated -without ping-pong tecnique- by single-guide balloon tamponade and covered stent implantation, transfusions, transient hepain neutralization with protamine and IVUS-guided stent optimization. At intravascular ultrasound (IVUS), conoronary ab-estrinseco compression by the mural hematoma distal to the perforation site was demonstrated as the most likely mechanism of distal vessel occlusion and the operator refrained from further stent implantation. Timely percutaneous intervention for atrial fibrillation-related cardioembolic stroke was technically successful but did not permit to ultimately avoid the fatal outcome.

Clinical implications: This case offers sound tecahing points:

- Avoid femoral puncture after use of glycoprotein inhibitors (GPI) and unnecessary angiographic reassessment if not clearly clinically indicated.
- Treatment of calcific lesions should be planned accurately by careful anatomical evaluation with intravascular imaging and "regret" of not having used devices for calcium modification is often observed in complicated cases. On the other hand, the use of rotational atherectomy is consistently associated with coronary perforations across the literature.
- Coronary artery perforation can be managed with single access technique by temporary deflating the tamponing balloon as described by Garbo, Gasparini et al (Block and deliver technique), thus allowing parallel wiring and exchanging the devices as rapidly as possible.
- A second operator should be always present in the lab for complex cases; whenever a life-threatening complication occurs, a single operator cannot contemporary perform pericardiocentesis, guide cardiopulmonary resuscitation maneuvers and care about a second vascular access for ping-pong technique.

Perspectives: The effects of coagulation system «manipulation» with heparin and protamine remain unpredictable in emergency situations. In addition, transfusion of packed red cells units after major bleeding may prompt and propagate thrombosis, intra-arterially, intra-venously and intra-cavity, either in left ventricle or in left atrial appendage. The impact of cardioembolic stroke in the setting of acute coronary syndrome, therefore on top of dual antiplatelet therapy and anticoagulants, is devastating despite successful percutaneous intervention because of high risk of hemorrhagic transformation.