



New actors, new theater

"...with the advent of hybrid procedures such as congenital heart and structural heart disease interventions, in particular percutaneous heart valve implantation, the interventionalist's next leap is to gain real surgical skills..."

Since the first catheterization of a human vessel by Werner Forssmann in 1929 [1], the actors playing in the field of vessel catheterization have continued to change over time, passing from the radiologist to the radiologist with angiology expertise to the cardiologist with radiological expertise, and with the advent of coronary angioplasty by Gruentzing [2], to the cardiologist with surgical skills, that is, the interventional cardiologist. Similarly, the old, dirty and dark radiological suites, which resembled a photography dark room rather than an operating room, have becoming larger, brighter and contain plenty of new and exciting equipment including the brilliance intensificator, the recent flat panel, intravascular ultrasound, intracardiac echocardiogram, functional flow and pressure wire consoles, optical coherence tomography, angioplasty catheters and a number of different small and large stents and occluder devices. This technological escalation changed the role of the invasive professional from a simple observer and recorder of physiological and pathological phenomena to a real endovascular interventionalist, the expert in translating body images into therapeutic actions.

Now, with the advent of hybrid procedures such as congenital heart and structural heart disease interventions, in particular percutaneous heart valve implantation, the interventionalist's next leap is to gain real surgical skills, becoming a new figure – a true endocardiovascular surgeon. In the 1940s' poor Italy, which lacked a true working public health system, the family physician was not only the physician, but also the surgeon and medicine doctor. They were able to not only make a diagnosis, but also to carry

out surgical procedures such as cesarean partum, skin incision and abscess drainage. Now, we have to simply go back and re-educate ourselves about a little bit of surgery.

By changing the actor, the theater cannot remain the same; it is necessary that health system governors throughout the world are aware of the dramatic changes and must be prepared to provide hybrid rooms that incorporate all the necessities of this new age: space, sterility and powerful image equipment including flat panel and computed tomography, together with all the usual instrumentation of the interventional cardiologist. The cost would probably be high to begin with, but this new combination of actor and theater will probably be the only cardiovascular surgery required for the next 30 years.

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Gianluca Rigatelli

Author for correspondence:
Section of Congenital Heart Disease
Interventions, Cardiovascular
Diagnosis & Endoluminal Interventions
Unit, Rovigo General Hospital, Rovigo,
Via Mozart 9, 37048 Legnago,
Verona, Italy
Tel.: +39 034 7191 2016
Fax: +39 044 220 164
jackyheart@libero.it

Aravinda Nanjudnappa

West Virginia University, WV, USA

Robert S Dieter

Loyola University, IL, USA

Thach Nguyen

St Mary Medical Center, IN, USA