Patient safety in invasive cardiology

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Invasive cardiology procedures are nowadays performed in cardiac catheterization laboratories (CAT LAB) and electrophysiology laboratories (EP LAB) or their hybrid versions. Invasive cardiac LABs are a complex environment in which highly trained subspecialists and nurses interact with each other using sophisticated equipment to care for patients with severe cardiac disease and significant comorbidities¹. Nonetheless, the highly skilled and dedicated personnel in LABs are human and adverse events are possible. The hazards associated with invasive cardiovascular procedures include vascular injury, systemic embolization, contrast agent-induced nephropathy, and radiation-induced injury². Although substantial progress has been made, severe life-threatening and fatal complications still occur, and the goal of making such procedures hazard-free remains elusive. In the most developed countries, despite the use of the most modern technologies, 10 to 12% of patients are exposed to incident situations, of which even half could have been prevented. In Croatia, for now, there is no systematic data on incidents that threaten the safety of treatment at the level of institutions and at the national level. Preventable errors are often not related to the failure of technical skill, training, or knowledge but represent the cognitive, system, or teamwork failures. Many studies highlight lack of communication as a factor in adverse events in more than 80% of cases. The risk can be best minimized by careful patient preparation and attention to details in the execution of the procedure itself. Many studies have shown how the usage of checklists can improve team dynamics and minimize errors. The concept of a preprocedural "time-out" or checklist has become an established safety practice throughout health care. A checklist forces the team to take a systematic approach to reviewing the issues specific to an individual patient. Checklists are most valuable where most of the procedures performed are routine, where staff may become complacent with the risks of a procedure and overlook preventable safety risks.

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