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Editorial

Simulation-Based Training for Cardiothoracic Surgery Residents/Fellows in Pakistan

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Modern surgical simulation dates back to the 19th century, when surgeons practiced procedures on cadavers and animals.[1] The use of artificial (computer-based) simulators started only a few decades ago. The Accreditation Council for Graduate Medical Education (ACGME) and the American College of Surgeons have recommended the inclusion of simulation-based training in surgical fields.[2]

Cardiac Surgery is now an expanding clinical speciality in Pakistan. There is a well-established structured 5-year fellowship training program (FCPS) for this super-specialty. However, there are concerns regarding safe training and skill development in a resource-limited country like Pakistan.[3]

Simulation can significantly reduce the risks associated with the cardiothoracic surgeries.[4] It also helps produce and train a curriculum for cardiothoracic surgery fellowships, that is cost-efficient, time-efficient, and universal.[1] In Pakistan, hospitals have a large influx of patients. Giving hands-on training to residents and fellows initially in the OR can be risky and time-consuming, hence simulator-based learning coupled with hands-on can make it a safe and efficient way of teaching.[2]

Surgical simulation gives a relaxed and stress-free environment to the trainees to polish their surgical skills.[4] Simulation based trained is used globally in training of a wide range of procedures e.g. cardiopulmonary bypass (CPB), endovascular procedures, and coronary artery bypass (CAB), etc. However, a detailed review of the simulators is a topic of its own. Our emphasis is on computer-based artificial simulators.

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Simulation cannot eliminate the need for real patient interaction, but to practically use it in combination with wet lab and hands-on real patients for a much safer transition to independent patient care. We can have simulators individually in hospitals or at least regional installation of simulators for residents from adjoining areas.

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