



Enhancing cardiovascular surgeons' training through the use of Aortic Cannulation Simulator: Evidence from a Study at the Republican Research Center of Emergency Medicine

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Abstract

The training of cardiovascular surgeons is a complex and lengthy process that requires extensive knowledge, technical skills, and practical experience. One of the most important aspects of this training is the development of the necessary skills for aortic cannulation, a critical step in many cardiac surgical procedures. To optimize this process, the Republican Research Center of Emergency Medicine has implemented the use of an aortic cannulation simulator in their training program. In this abstract, we will explore the effectiveness of this simulator in improving the training process for cardiovascular surgeons.

Methodology

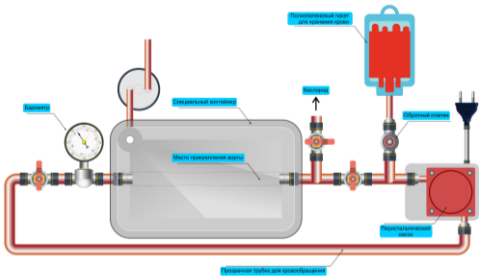
A comparative study was conducted over a two-month period, involving two groups of cardiovascular surgery residents: one group was trained using the simulator, while the other group received traditional training without the use of the simulator. The study analyzed the success rates and time required for aortic cannulation in both groups.

Results

The study compared the effectiveness of an aortic cannulation simulator in cardiovascular surgery residents. The simulator group (Group 1) showed a significantly shorter procedure time (6.26 minutes) compared to the control group (Group 2) (8.74 minutes). Both groups achieved a high success rate (20/20) in cannulations. The simulator group demonstrated higher skills and execution quality (8.3/10) and greater overall satisfaction (8.5/10) compared to the control group (7.2/10 and 7.8/10, respectively). These findings support the efficacy of simulator-based training in cardiovascular surgery education.

Conclusion

The aortic cannulation simulator is an effective tool in optimizing the training process for cardiovascular surgeons. The study results demonstrate that the use of the simulator significantly improves the success rates of aortic cannulation among trainees, while also reducing the amount of time required for training. The implementation of this simulator in cardiovascular surgery training programs is therefore recommended to enhance the overall training experience and outcomes for trainees.



Group	Procedure Time (minutes)	Success Rate (out of 20)	Skills and Execution Quality (out of 10)	Overall Satisfaction (out of 10)
Simulator (Group 1)	6.26	20	8.3	8.5
Control (Group 2)	8.74	20	7.2	7.8

