Is There Real Evidence To Support The Value Of Simulation In Vascular Surgery: Vascular Surgery Endo And Open Is Not Like Piloting An Aircraft

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Simulation

• Learning

• Practise – all ready obtained skills.
"Low-volume/High-complexity"

Incorporating simulation in vascular surgery education.

Part task trainers

Human patient simulators

Virtual reality

Validity in vascular surgery?
**Patient-specific simulation for endovascular procedures: qualitative evaluation of the development process**

**Methods/Results**

By thematic analysis of qualitative data, an algorithm was developed, focusing on interview data, data from literature, and interview feedback. The findings suggest that patient-specific simulations can improve the accuracy of endovascular procedures and reduce complications.

**Validity:** excellent

**Realism:** good

Senior trainees better than junior trainees

“Attendings/Consultant” better than trainees

More experience the better you do

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**Evidence for Endovascular Simulation Training: A Systematic Review**

**Introduction**

The use of simulation in endovascular procedures is increasing in popularity. This systematic review aims to evaluate the evidence supporting the use of simulation in endovascular training.

**Methods**

A systematic search of electronic databases was conducted using predetermined criteria. The quality of the included studies was assessed using the Newcastle-Ottawa Scale.

**Results**

A total of 20 studies were included in the review. The findings suggest that simulation training can improve endovascular skills, but further high-quality research is needed to establish the effectiveness of simulation training.

**Conclusion**

Simulation training is a valuable tool in endovascular training, and its use should be encouraged.

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**An Evaluation of the Impact of High-Fidelity Endovascular Simulation on Surgeon Stress and Technical Performance**

**Objective**

To evaluate the impact of high-fidelity simulation on surgeon stress and technical performance.

**Methods**

A randomized controlled trial was conducted, with participants being divided into two groups: high-fidelity simulation group and control group. The primary outcomes were stress levels and technical performance.

**Results**

The high-fidelity simulation group showed lower stress levels and improved technical performance compared to the control group.

**Conclusion**

High-fidelity simulation can be a useful adjunct to non-technical skill training.

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**A nationwide survey of vascular surgery trainees reveals trends in operative experience, confidence, and attitudes about simulation**

**Objective**

To evaluate the trends in operative experience, confidence, and attitudes about simulation among vascular surgery trainees.

**Methods**

A survey was conducted among vascular surgery trainees, with data collected from multiple sources.

**Results**

The survey revealed that simulation training is widely used among vascular surgery trainees, with a high percentage of trainees reporting satisfaction with simulation training.

**Conclusion**

Simulation training is a valuable tool in vascular surgery training, and its use should be encouraged.

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**Endo used to fail candidates now open simulation fails candidates**
Impact on clinical outcomes?

**Prospective Trial of Low-Fidelity Deliberate Practice of Aortic and Coronary Anastomoses (TECoG 002)**

**CONCLUSIONS**

In a multicenter cohort of senior trainees in general and cardiovascular surgery, a home curriculum of deliberate practice of aortic and coronary anastomoses using a low-fidelity simulator was feasible but did not lead to sustained, significant increases in technical proficiency scores.

No improvement in technical proficiency

**Surgical Simulation**

**CONCLUSIONS**

No benefit

**Familiarity**

Difficult to prove in terms of patient outcomes

**Simulation Training Improves Resident Performance in Hand-Sewn Vascular and Bowel Anastomoses**

**Pre-operative**

**Operative**

**Post-operative**

**Improved operating time**

No improvement in patient outcomes

**The Role of Simulation in Boosting the Learning Curve in EVAR Procedures**

**Guidance for Endovascular Simulation Training: A Systematic Review**

No benefit

**Difficult to prove in terms of patient outcomes**
Thank You