

## **Der Einfluß der virtuellen Trainingssysteme auf die Lernkurve von operativen Eingriffen in der HNO** **Influence of virtual training systems on surgical learning curve in ORL- surgery**

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### Purpose

Surgeons undergo a critical learning curve by performing their first 20-40 surgical procedures. Since many years different authors have been publishing concepts for virtual surgical training.This study is to examine the question of short- and long-term learning success and specific content of learning.

### Materials and Methods

We use two individual and one artificial VR-scenario of petrous bone to exercise the performance of young ORL-surgeons. Parameters like time of procedure, total failure rate and serious failure rate were recorded.

Additionally drilling of cadaver-specimen were concluded.

### Results

VR-scenarios seem to be comparable to anatomical ones concerning surgical training. The learning impact is reproducible, solid and vulnerable to real surgery.

## Discussion

VR-training of surgical procedures is nowadays close to practical application. Integration of individual data, surgical planning capabilities, interference to CAS-workstation and S.-feedback are essential. Costs of VR-Systems will be decreasing by new I-O-devices.