

Periscopic Prism Glasses In Surgery, A Cheap And Real Time Method To Enhance Hand Dexterity And Hand Eye Coordination For Microsurgery

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Purpose

The purpose of the study was to evaluate the use of Lazy Glasses, a periscopic arrangement of wearable glasses for its efficacy in developing hand dexterity and hand eye coordination for microsurgery.

Materials and Methods

We enrolled 20 General Surgery residents who had no prior exposure to microscopic or endoscopic surgery. 10 residents were allowed to perform multiple suturing and dissection exercises on our self-designed training modules, using the lazy glasses, for a period of one hour a day for 5 days. The other 10 residents practiced the same exercises using naked eye and standard general surgical technique for the same period. All 20 residents were later made to perform the same procedures using standard operating microscopes. The results were compared on the basis of operating times, neatness of the procedure as well as a 5-point questionnaire.

Results

Residents who practiced with lazy glasses prior to exposure to a microscope did significantly well in terms of operating time, procedural outcomes and admitted to having developed a better coordination for performance under a microscope.

Conclusion

This simple cheap and easily available tool is an excellent method for young residents to practice hand dexterity and coordination. It can be used by residents who do not have access to microscopes to experience the feeling of operating without looking at their hands. Furthermore, it can be used as regular adjuvant in surgery to avoid neck strain and forward bending as its use eliminates the need for neck flexion.