The utility of HIGH FIDELITY SURGICAL SIMULATION in LATERAL CANTHOTOMY/CANTHOLYSIS in preparing ST1 TRAINEES for ON-CALL EMERGENCIES.

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Introduction

First year Ophthalmology trainees often work as part of the on-call rota providing out-of-hours care with a few months of clinical experience.

Retrobulbar haemorrhage (RBH) and orbital compartment syndrome is an ophthalmological emergency requiring urgent lateral canthotomy/cantholysis (LC/C).

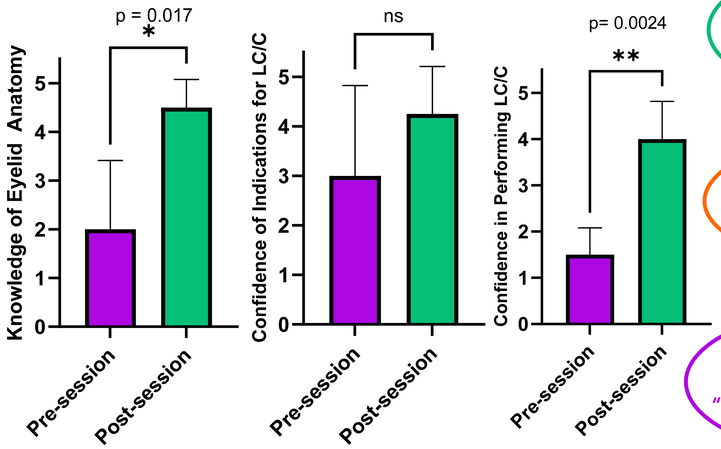
The aims of this study were to assess ST1 trainees' managing RBH given lack of relevant clinical exposure. We evaluated the efficacy of a high-fidelity surgical simulation to increase trainees' confidence and competency in this essential skill.

Methods

A porcine model of retrobulbar haemorrhage was delivered. Prior to simulation, trainees revised key aspects of eyelid anatomy and indications for LC/C.

Trainees were each expected to independently perform LC/C with senior supervision.

Pre- and post-simulation surveys which employed 5-point Likert scales were compared with unpaired t-test analysis to assess prior experience, knowledge and confidence.



"Practically very useful and translatable to day-to-day activities"

Aspects to be improved: larger wet-lab space would be useful

"Fantastic practical teaching session"
"Content was excellent"

Results

None of the ST1 trainees had any prior experience in performing LC/C (n=4). As a result of simulation, trainees self-reported knowledge of eyelid anatomy was statistically increased, whilst trainees' subjective confidence in performing LC/C in the emergency setting improved from 1.5 to 4 out of 5 which was statistically significant with p=0.0025. Trainees felt the session was highly worthwhile and of use to their day-to-day practice.

Conclusions

Trainees' confidence, knowledge and technique for performing LC/C was greatly improved by this high-fidelity surgical simulation for RBH. The ability to recognise the signs of an orbital compartment syndrome and act urgently are a crucial competencies required for independent on-call service. We recommend that trainees are offered the opportunity to perform LC/C in a high-fidelity model to help prepare them for the emergency setting.

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