Knowledge Assessment among Surgeons about Energy Devices safe use: A Multicenter Cross Sectional Study

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Objectives

To assess General Surgery trainee's knowledge about safe use of energy devices in two tertiary hospitals in Riyadh, Saudi Arabia

Background

Electro surgery is the use of high-frequency electrical energy to achieve cutting, and coagulation. This method has become ubiquitous worldwide for the purpose of achieving rapid hemostasis and rapid dissection of Tissues.

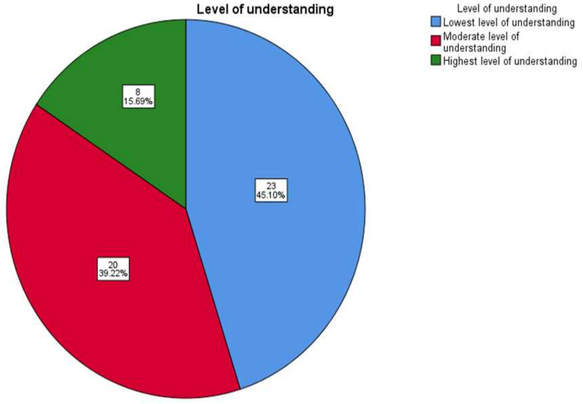


Figure 1: Proportion of participants demonstrating the expertise regarding the safe use of electrosurgery

Methods

Participants completed a 35-item multiple choice question examination, testing critical knowledge of Electro Surgery (ES). The examination was developed according to the objectives and blueprints of SAGES Fundamental Use of Surgical Energy (FUSE) curriculum. Sections of the examination included: principles of ES, ES-related adverse events, monopolar and bipolar devices, and pediatric considerations and interference with implantable devices. Scores were compared between juniors and seniors participants

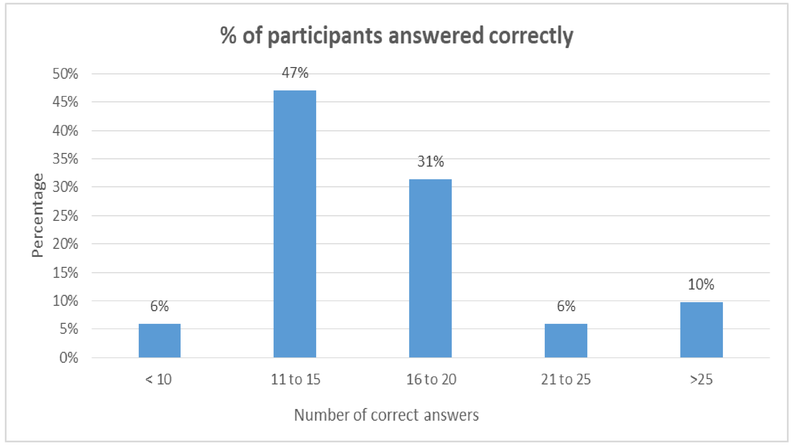


Figure 2: Proportion of participants who correctly answered the questions of the survey

Results

A total of 51 general surgical trainees from two academic hospitals completed the assessment. 15.69% of the participants correctly answered 30 questions out of 35 questions, 39.22% of the participants responded correctly to 20 questions out of 35 answers, and 45.09% who responded correctly to less than 20 questions. It was found that 52.2% of the individuals with a low level of understanding were junior residents as opposed to 87.5% of the participants with the highest level of understanding were senior residents with a significant P-value of 0.04.

Conclusions

Majority of general surgery residents enrolled in the Saudi Arabian board of surgery lack adequate knowledge about the safe and efficient use of surgical energy devices. There is a need to implement formal education or awareness programs in the existing curriculum with refreshers by conducting online courses or workshops for surgeons.