Animal dummy models and simulators for anesthesia training

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Organisation

Name of the organisation Ghent University (UGent)

Department Veterinary skillslab

Country Belgium

SCOPE OF THE METHOD

The Method relates to	Animal health
The Method is situated in	Education and training
Type of method	Other

DESCRIPTION

Method keywords

veterinary medicine

skillslab training

dummy

anesthesia

manual ventilation

mechanical ventilation

anesthetic monitoring

Scientific area keywords

Veterinary education

clinical training

Preclinical model

Method description

In the skillslab, dummy models and simulators are used for teaching various clinical skills. The veterinarians in training need to learn how to monitor and approach an animal under anesthesia. Furthermore, they need to learn ventilation techniques and comprehension of an anesthetic machine. An important part of this training process can be performed on dummy models and simulators in the skillslab also using anesthetic machines.

Lab equipment

Commercial dummies:

- Critical care Jerry (Rescuecritters.com)

Home-made dummies:

- stuffed toy dog with artificial lungs, endotracheal tube, ECG patches and IV catheter

- stuffed toy piglet with artificial lungs, endotracheal tube, ECG patches and IV catheter

Method status

History of use

Internally validated

PROS, CONS & FUTURE POTENTIAL

Advantages

The use of educational animal models in a skillslab offers a number of significant advantages:

- Reduced use of laboratory animals and reduced discomfort for patients, as procedures can be practised on dummy models and simulators before performing them on a live animal.

- Teaching of clinical skills in a quiet and safe environment, reducing anxiety and stress for the veterinary student.

- Complex practical skills can be split into a number of small steps when practising them in the skillslab.

Challenges

- High cost of models,

- Clinical training on live animals needed as well,

- Creating and repairing the home-made models is time consuming for a large group of students.

- Also, students learn how to connect monitoring cables in a logical order, but no real or simulation of monitoring parameters is included in the simulator up to now.

Modifications

Further optimalisation of home-made models and purchasing available commercial models. Certainly, a simulation of monitoring parameters in different situations might be included in the future.

Future & Other applications

Training for lab animal anesthetic procedures.

REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

Associated documents

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