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Abstract : The main objectives of a training to surgery are to learn how to consider the patient as a whole and to acquire perfect technical skills. Often neglected, the latter allows a decrease the impact of surgical trauma, morbidity and even mortality. Insisting on the importance of a thorough evaluation of the patient, from the physiological point of view as well as in term of discomfort and pain, this set of courses aims to increase the technical competence of novice or confirmed trainees.
The program focuses on : Mastering of the surgical context from the preparation of the equipment and tools to the asepsis process / Numerous practical training with alternative supports / Interactive discussion and analysis of selected surgical procedure and procedure proposed by trainees.



Twenty two hours of training include 90% practical and tutored courses, a maximum of 20 attendees* per session.

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Teaching is ensured by veterinarian surgeon DMV and lecture or research scientists (Ecole de Chirurgie de Lyon).

Les supports d'enseignement, documents, pièces anatomiques et substituts*, sont conçus spécialement.

Teaching material, documents and alternative supports (*patent pending*) are specially made.

This formation as been approved by th swiss « Association des Vétérinaires Cantonaux » and the french « Commission Nationale de l'Expérimentation Animale ».

This poster has been awarded the first price of the « Association Française des Sciences et Techniques de l'Animal de Laboratoire » during the 2011 meeting in Marne La Vallée – France.

* In France a initial « Niveau 1 » or « 2 » training is required.



Exemple of alternative support
Isolated pig toe

Superficial and deep suture
Treatment of xutaneous lesions, of sebaceous cyst
Soft tissue handling and repair (tendon)

SIMPLIFIED PROGRAM

Themes	Objectives	Educational means
Registration & Introductive session	Presentation of the educational means to understand how state of the art alternative supports can help to acquire technical gesture for experimental surgery.	
Introduction to experimental surgery	Ethical and legal requirements. Surgical context, anesthesia and analgesia, post operative follow-up and care. How to prevent and cure surgical complications.	Course and discussion
Aseptic techniques for the experimenter	Hand washing, clothing (gowning) and gloving	Evaluated practice
Setting up a surgical procedure	Room set up. How to prepare a surgical toolbox and select single-use consumables. Sterilization.	Hands-on experience
Aseptic techniques for the patient	Shaving and cutaneous disinfection, Draping.	Evaluated practice
Mastering of the injection	Local anesthesia, injection of a microchip.	Evaluated practice
Handling of surgical tools	Technical ease and surgical knots, superficial and deep suture.	Evaluated practice
Suturing techniques	Technical ease, Handling and manipulation of suturing needles, Simple stitches & continuous sutures.	Evaluated practice
Practice	Treatment of cutaneous lesions, of sebaceous cyst. Cytology, truct biopsy, fine needle aspiration. Wound management, debridement of traumatic wounds and abscess drainage.	Evaluated practice with anatomical pieces & substitutes
Electrosurgery	Theoretical background, haemostasis with electrocoagulation.	Evaluated practice with anatomical pieces
Surgical approach	Abdominal cutting and suturing. Haemostasis, ligation of a vascular pedicle, transfixion. End-to-end intestinal anastomosis. Soft tissue handling and repair (vein, tendon).	Evaluated practice with anatomical pieces and surgical toolbox
Per-, post-operative monitoring	Clinical follow-up, pre-, per-, post-operative care.	Course
Case study and on-demand study of a procedure	To apply newly acquired knowledge to real cases and trainees own procedures.	Discussion
Evaluation	Individual validation of hands-on practices, summary and feedback (quality approach).	

CON'S
No possible feedback as with live animals (bleeding complications), no observation of a recovery or practice of post-operative care. No possible observation of an animal's reaction.
Difficulty to develop credible and adequate substitutes, often expensive and complex.
Does not allow the trainees to experience and cope with the stress and anxiety linked to their use of live animals for real (duration of the surgery, pain, complications).



PRO'S
3R Replacement, reduction of the number of animal used, refinement of tuition methods.
The training focuses on the acquisition of surgical techniques and afferent organization.
An alternative training implies a change of habits and promotes trainees' abilities to adapt their practice. It also encourages the use of requalified animals (after euthanasia).

Conclusion :
This course covers all the steps of training to surgery, with an emphasis on individual practice and provides an answer to the necessary reduction of the number of animals used for teaching.
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