

Module title:	Management of life-threatening situations in small animal anaesthesia	ECTS	1
Polish translation:	Postępowanie w sytuacjach zagrażających życiu w anestezjologii małych zwierząt		
Course:	Veterinary Medicine		

Module language: English		Stage: JM-FVM	
Form of studies: ☒ intramural ☐ extramural	Type of module: ☐ basic ☒ directional	☐ mandatory ☒ elective	Semester: 11 ☒ winter semester ☐ summer semester
Academic year: 6		Intake 2021/2022	Catalogue number: FVM -V-JMSS-11W-ED19_20

Module coordinator:	Dr n. wet. Agnieszka Wrzesińska		
Teachers responsible for the module:	Dr n. wet. Agnieszka Wrzesińska, Department of Pathology and Veterinary Diagnostics		
Assumptions, Goals, and Course Description	The course is intended for students with basic knowledge of anaesthesia in dogs and cats. The course focuses on the recognition of life-threatening conditions and the principles of rapid, algorithm-based management of acute complications occurring during anaesthesia and during patient recovery. The aim of the course is to prepare students to: - recognise the most common pathological conditions and life-threatening situations in anaesthetised patients; - correctly interpret basic monitoring parameters during anaesthesia; - make rapid and appropriate therapeutic decisions that may influence the procedure of anaesthesia; - use drugs and therapeutic methods employed in anaesthetic emergencies; - work effectively as part of a team when managing emergency situations. Course Content - Assessment of patients requiring emergency anaesthesia and prioritisation of therapeutic interventions. - Anaesthetic patient monitoring – interpretation of basic monitoring parameters. - Hypotension and perfusion disorders – recognition and management. - Bradycardia, tachycardia, and cardiac arrhythmias during anaesthesia – recognition and management. - Hypoxaemia, hypoventilation, hypercapnia, and apnoea – recognition and management. - Management of difficulties in securing and maintaining airway patency. - Oxygen therapy and the principles of mechanical ventilation. - Hypothermia and other complications during the post-anaesthetic period. - Drugs used in life-threatening emergencies during anaesthesia – indications, mechanisms of action, and dosing principles. - Complications associated with anaesthetic and analgesic drugs and therapeutic options. - Anaesthetic management of patients with concurrent diseases. - Clinical case analysis, selection of the anaesthetic technique, and appropriate drugs according to the patient's clinical condition		
Teaching forms, number of hours:	a) Seminars; hours 15;		
Teaching methods:	Problem-based lectures, analysis of clinical cases and simulation of life-threatening pathological conditions occurring during anaesthesia, interpretation of monitoring data, discussion, and teamwork. Detailed schedule will be defined by the coordinator of the course at the beginning of semester. Detailed organization of consultations will be defined by the coordinator of the course at the beginning of semester.		
Formal prerequisites and initial requirements:	Animal physiology, Animal pathophysiology, Dog and cat diseases Students should have theoretical and practical knowledge acquired in the above courses		
Learning effects	Course outcomes:	Learning outcomes relative to the course outcomes	Impact on the course outcomes*
Knowledge:	1	The student knows and understands the most common life-threatening conditions occurring during anaesthesia in dogs and cats;	W1 1

	2	The student knows and understands the principles of monitoring the anaesthetised patient and the clinical significance of basic monitoring parameters	W2	1														
	3	The student knows and understands the basic principles of managing disturbances and knows how to prepare anesthetic protocol according to certain additional diseases	W3	3														
	4	The student knows and understands the indications for the use of analgetic, anesthetic and basic emergency drugs and the principles of their dosing during anesthesia;	W4	2														
Skills:	1	The student is able to recognise the basic clinical signs of deterioration in the condition of an anaesthetised patient	U1	1														
	2	The student is able to correctly interpret basic cardiovascular and respiratory monitoring parameters;	U2	2														
	3	The student is able to establish priorities for management in the event of sudden deterioration in the patient's condition	U3	3														
	4	The student is able to select appropriate basic therapeutic interventions according to the identified clinical condition	U4	3														
Competences:	1	The student is prepared to undertake responsible actions in life-threatening situations involving the patient	K1	3														
	2	The student is prepared to work effectively as part of a team and communicate efficiently during the management of emergency situations	K2	2														
	3	The student is prepared to systematically develop and update knowledge in the fields of anaesthesiology and emergency medicine	K3	1														
Objectives of the module required to obtain learning effects:		The module aims to: 1. provide students with knowledge of the most common life-threatening conditions occurring during anaesthesia in dogs and cats; 2. develop the ability to recognise early signs of deterioration in the condition of an anaesthetised patient and to identify abnormalities in basic cardiovascular and respiratory monitoring parameters; 3. develop the ability to assess the severity of the patient's condition and establish appropriate priorities for emergency management; 4. familiarise students with the indications, mechanisms of action, and basic dosing principles of drugs used in life-threatening anaesthetic emergencies; 5. develop practical skills in the initial management of cardiovascular and respiratory emergencies during anaesthesia; 6. develop the ability to select and implement appropriate therapeutic interventions based on the patient's clinical condition; 7. develop effective teamwork and communication skills during the management of life-threatening situations; 8. promote responsible clinical decision-making and the systematic development and updating of knowledge in anaesthesiology and emergency medicine.																
Assessment methods:		Final written test																
Detail description of assessment methods;		No extra assessment methods are anticipated.																
Formal documentation of learning outcome:		eHMS entry. presence lists, database of signs and written tests																
Elements impelling final grade:		1 Conditions for taking the exam a) Students must have at least 80% presence at seminars. b) During elective each student will be required to present anaesthesia and analgesia plan for 1 selected case. 2 Final grade is obtained during exam a) Form of exam – test b) Exam covers material presented during seminars <table><tr><td>Percent points needed:</td><td>grade:</td></tr><tr><td>94-100</td><td>excellent (5)</td></tr><tr><td>88-93.5</td><td>very good (4.5)</td></tr><tr><td>82 - 87.5</td><td>good (4)</td></tr><tr><td>76 - 81.5</td><td>sufficient plus (3.5)</td></tr><tr><td>70 - 75.5</td><td>sufficient (3)</td></tr><tr><td>0 - 69.5</td><td>failed (2)</td></tr></table>			Percent points needed:	grade:	94-100	excellent (5)	88-93.5	very good (4.5)	82 - 87.5	good (4)	76 - 81.5	sufficient plus (3.5)	70 - 75.5	sufficient (3)	0 - 69.5	failed (2)
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Teaching base:		Classrooms of the Division of Laboratory and Clinical Diagnostics																
Mandatory materials: 1. Lamont L.A., Grimm K.A., Robertson S.A., Love L, Schroeder C.A. (eds.). Veterinary Anesthesia and Analgesia: The Sixth Edition of Lumb and Jones. 6th ed. Wiley-Blackwell, 2024. 2.Duke-Novakovski T., de Vries M., Seymour C. (eds.). BSAVA Manual of Canine and Feline Anaesthesia and Analgesia. 3rd ed. BSAVA, 2016. Supportive materials:																		

3. Grubb T., et al. 2020 AAHA Anesthesia and Monitoring Guidelines for Dogs and Cats. *Journal of the American Animal Hospital Association*. 2020;56(2):59–82.
4. Robertson S.A., et al. 2020 AAFP Feline Anesthesia Guidelines. *Journal of Feline Medicine and Surgery*. 2020;22(1):1–29
5. Bailey K., Briley J., Duffee L., et al. The American College of Veterinary Anesthesia and Analgesia Small Animal Anesthesia and Sedation Monitoring Guidelines 2025. *Veterinary Anaesthesia and Analgesia*. 2025;52(4):377–385. doi:10.1016/j.vaa.2025.03.015.
6. Teotino G., Neale A., Auckburally A. Arterial blood pressure. Part 2: causes and management of hypotension during general anaesthesia in cats and dogs. *In Practice*. 2024;46(6):289–301. doi:10.1002/inpr.457

ANNOTATIONS

14 - 20 students/group

* 3 – complete and detailed, 2 – moderate, 1 – basic.

Quantitative summary of the module:

Estimated number of work hours per student (contact and self-study) essential to achieve presumed learning outcomes of the module - base for quantifying ECTS:	15 h
Total ECTS points, accumulated by students during contact learning:	1 ECTS