

**UNIVERSITY OF NOVI SAD
FACULTY OF AGRICULTURE
DEPARTMENT OF VETERINARY MEDICINE**

assistant professor Miodrag Radinović

Report for Tempus project

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In the period from 17 to 30 November 2014, I made a professional visit to the Clinic for ruminants at the University of Veterinary Medicine in Vienna.

During the visit I was able to follow the work of the clinic and to actively participate in the work together with colleagues at the clinic and students on practical exercises. I escorted a larger number of clinical cases with colleagues, had the opportunity to exchange opinions on the diagnosis and prognosis of the disease in patients. I have also established an active communication with students about current exercise from the Ruminant diseases as well as studies in general.

Clinic for ruminants functions as part of the educational infrastructure of the University of Veterinary Medicine and works closely with other units of the university.

At the clinic there is a total of 19 employees. Of these, 11 teaching and working with students and 8 staff for maintenance of facilities, feeding and care of animals. The structure of employees has one professor, three assistant professors and seven assistants who work directly with students. Every day is an assistant on duty at the clinic and required to come in during the night if need be.

The flow of patients at the clinic is about 800 per year, of which there are 600 cattle, 100 alpaca and llama and about 100 sheep and goats. There is a tendency in recent years to reduce the number of cows in the clinic and an increase in the number of alpaca and llama. For the delivery of patients to the clinic in the use is a truck owned by clinic, who deliveries patients within 200 km.



Picture 1 Arrival of patient to clinic



Picture 2 Alpaca and llama are patients with increasing number

Student participation in the work of clinic depends of which semester they are attending, so in the first semester students only help with feed and care for animals. In the fourth semester, as part of clinical education students perform a clinical examination of animals and assessment of the general condition.

In the ninth semester, in the context of clinical rotations at the clinic for ruminants students are actively involved in working with the animals. After the arrival of each patient's, students perform a clinical examination and all data are entered in the patient's chart. Every morning, students examine patients who are already in the clinic, writing their findings in the patient's chart and report it to assistant. After that, assistant is determining the therapy for each patient that students also administer. If euthanasia or death of the patient happen to students were present during the autopsy.

Same clinical exercises starting at seven in the morning when students come to the clinic and start review of patients, at eight assistants and professors are coming into the building and then their students refer their findings. After that, the assistant is taking drugs from pharmacy so students can perform application.



Picture 3 Students working with patient

From equipment to the clinic for ruminants, excluding equipment for classic clinical examination and application of medicines and equipment exists for special examinations. So there are three ultrasonic apparatus with various probes for inspection of large and small ruminants. There is endoscope with extensions for examination of the respiratory tract, gastrointestinal tract and mammary gland. The clinic also has a mobile x-ray machine as well as three tables for fixation of large ruminants.



Picture 4 Endoscopic examination

Data on patients arrived at the clinic are entered in the patient's chart that contains a large amount of data on the patient but also the owner of the herd from which the patient is

encouraged. Thus, the card contains the data about the owner, date of arrival of the patient at the clinic, the name of the veterinarian who treated the animal with the owner, race, gender, age. For female animals is also entered if there is pregnancy. Animal ear tag number is also entered. Herd status to BVD for cattle and for CAE and Maedi-Visna for small ruminants. It also contains the possible diagnosis, if the vet clinician forwarded diagnosis.

Then, after completion of the first review of the animals in the card is entered the following data. First, if animal has symptoms of foot-and-mouth disease. Then clinicians evaluate the behavior of animals, body position in space, nutritional status, skin elasticity. Inspection of hair, horns and hooves is also done and changes are recorded. Rectal temperature is measured. Then examine of the eyeball and the mucous membranes of the eyes, possibly discharge from the eye is also done. Views of the nose, mucous membranes and discharge from nose. Inspection of oral cavity, the mucous membranes of the mouth and salivation is next step. Then perform palpation of the larynx and trachea first ring and trying to provoke coughing, these data are also recorded. Inspection of jugular vein and the presence of the venous pulse is conducted. Arterial pulse frequency and pulse quality. Overview of the available lymph nodes is also performed. Then enter data about how animals breathe and perform the percussion of lung and determination of the caudal border of the lung tissue. Auscultation of the heart and lungs is conducted and this finding is entered also. Tension of the abdominal wall is done counting rumen contractions and if there are indications shall be made to probe the foreign body. Performs the percussion of the abdomen and records the existence of ping sound if present. In the carton there is room for other important findings, as gynecological, orthopedic, during rectal examination findings.

Still it should be noted that in addition to cardboard patient all patient data are entered in the electronic system updates.

Theoretical classes for students who choose module "Ruminant Medicine" in X and XI semester have lectures every day, exercises are based on the principle of clinical rotations, have organized trips to farms where they have chance to observe sick animals and compile a report on its findings.

For the subject of an extensive literature is available:

- Tierärztliche Bestandsbetreuung beim Milchrind (De Kruif, Mansfeld, Hoedemaker)
- Klinische Propädeutik der Haus- und Heimtiere (Baumgartner)
- Erfolgreiche Milchviehfütterung (Spiekers, Naußbaum, Potthast)
- Praktischer Leitfaden Mastitis (Winter)
- Sheep and Goat Medicine (D.G. Pugh, A. N. Baird)
- Kalberkrankheiten (Rademacher, Ulmer Verlag)
- Current therapy in large animal Theriogenology (Youngquist)
- Ferilitätsstörungen (Grunert)