

# Comments on Veterinary Medicine In Austria

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AUSTRIA IS A REMNANT of a once great empire in central Europe which controlled the economic, political and cultural life of most of the European continent. Vienna, the capital city for this earlier empire, is much too large to be supported by the present small state of Austria. To a lesser degree, the same thing is true of the agricultural and veterinary schools in Vienna. They were established to meet the needs of the great Austro-Hungarian empire previous to World War I. Since that time the buildings and the staff have been larger than necessary for the limited interests of Austria of today, and the inability of the nation to support these schools adequately has led to a more or less continual paring of activities.

The veterinary college in Vienna is the only one in Austria. It is over 200 years old. The physical plant of the college is large, old and in some respects lacking in modern equipment. It is located in the heart of the city facing what was once a canal from the Danube River but which is now occupied by railroad tracks. The central building of the school was once used as a Jesuit monastery. The Institute of Physiology occupies the rooms in which animals were slaughtered. The college was struck by 7 bombs during the war. Rebuilding was completed in 1953.

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The veterinary college is composed of many different institutes or departments: Gross Anatomy; Histology, Embryology and Fish Diseases; Pathology; Physiology; Pharmacology; Zoology; Bacteriology; Botany; Physics; Chemistry; Parasitology; Milk Hygiene and non-animal food inspection; Meat Hygiene and animal food inspection; Animal Slaughter; Animal Husbandry; Veterinary Jurisprudence; Roentgenology; Clinics (Obstetrics and Gynecology); Surgery and Eye Diseases; Internal Medicine (equine and small animal); Cattle Clinic; and Polyclinic. A limited ambulatory practice, treating mostly horses and cattle, is conducted in the immediate area surrounding Vienna. Each institute has one professor in charge.

The College is governed by the joint faculty committee of professors working in cooperation with the Ministry of Education for the State of Austria. This committee elects one of its professors to serve for a 2-year period as dean or rector of the institution.

One of the outstanding things in the school at Vienna is the museum of pathological specimens in the Institute of Pathology. One man spends all of his time working in the museum and supervising its use by students. There are approximately 15,000 excellent specimens to be studied.

The Institute of Anatomy was completely destroyed during the war. This has been rebuilt so that fine laboratory space

and an excellent lecture room are now available. There is a great deal of emphasis placed upon anatomy in Vienna as well as in all European schools. Generally, the students study anatomy for a minimum of 2 years, and in some places, 3 years.

The curriculum at the school may be completed in 5 years, but most students require 6½ years, which includes the time required for preparation for examinations. During this period, they take all of their course work in the veterinary school which is a complete educational unit. For example, the college has an Institute of Animal Husbandry that maintains different breeds of cattle for teaching purposes. The curriculum also includes instruction in fish and bee diseases. In Europe the veterinary profession reserves control over matters of animal nutrition, animal breeding and animal slaughter with subsequent inspection of all human foods of animal origin and some of vegetable origin. The activities of the agriculturist on the continent do not extend into the field of animal physiology, animal breeding or food inspection.

There are about 275 students enrolled in the 5-year veterinary curriculum in Vienna. No one knows exactly how many students there are because the status of certain students is doubtful. Their study is sometimes spread over a period of many years, and it is uncertain whether they have dropped out or will be back soon. One student in pharmacology had started his studies 8 years before but had not yet completed the first 2 years of the curriculum. Supposedly, there is a 7-year limit in such a case. A student presents himself for a series of examinations in the fundamental subjects at the end of his first 2 years. After having passed all of these examinations, he may continue his course for another 2 years, when the process is repeated. A final examination period at the end of his curriculum is also necessary.

The student mortality in the educational system in Austria is quite high. Exact figures for this are lacking but a relatively large percentage of students

fail at the various levels of the educational system, beginning at the age of 10 years when the first hurdle is met.

After the student receives his veterinary degree which enables him to practice, he may remain at the school for a period of 3 to 6 months to do research under the direction of a professor of his own choice. The successful completion of this period of research and the production of a creditable paper for publication by the institute will justify the awarding of a degree of Doctor of Veterinary Medicine. Many students study for these degrees because there is much competition among the university trained people. A doctor's degree adds a bit of needed prestige and also enables graduates to obtain better positions. There is a surplus of veterinarians in Austria; the new graduate frequently has difficulty finding a position or a location that will support him.

In Austria there are about 1300 veterinarians. About 200 of these are official government workers. There are 60 veterinarians who work in research and education; nearly 50 are employed as meat and milk inspectors. Twenty veterinarians are in the field of animal breeding, and the remaining 900 are in private practice. These private practitioners may be called upon as needed by the ministry, which pays them to help control infectious diseases during a large scale outbreak. The veterinary government is under the Ministry of Agriculture. At most, there cannot be more than five veterinarians in Austria that are in commercial work. The apothecary supplies most of the drugs used by the veterinarian. A few drugs are imported from Germany.

The practitioner in Austria spends about two-thirds of his time working with cattle and the remaining one-third divided between horses and swine. Sheep, goats and poultry receive practically no attention. There are only a few small animal practitioners. Practically all of them are located in Vienna, where there are entirely too many dogs for the number of people. People cannot afford to have chil-

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aged. The pigs will be added to other new litters or fed as orphans. Such attention frequently diverts too much time from field work and other chores, and the veterinarian is contacted for help.

The effectiveness of our therapy is difficult to evaluate because spontaneous recovery may occur at any time. Controlled comparisons of treatment have not been reported. Probably the most popular treatment has been the subcutaneous or intramuscular injection of posterior pituitary extract in doses of 30 to 50 units (1.5 to 2.5 cc.) to stimulate the "let-down" of milk. More recently the purified oxytocic principle has been employed. It is thought that the stimulation of the neurohormonal reflex mechanism quiets the sow as the pressure of the milk within the udder develops. When this is successful the sow lies down within a few minutes and begins to "talk to" her nursing pigs.

Extracts of anterior pituitary are used less frequently by practicing veterinarians.

Sedation with Nembutal (pentobarbitol sodium) has merit in treatment. A small dose, 1 cc. per 30-40 lbs., may be given intravenously in an ear vein or in the anterior vena cava. Even this small dose will usually put the animal down in light anesthesia. The effect is rapidly transitory however. To overcome this, some veterinarians prefer to inject 5-10 cc. deep into each ham of the average size sow. The intramuscular route provides long sedation and untoward effects are not seen in the pigs from Nembutal in the milk. Depression occurs in about 10-15 minutes and when used intramuscularly persists for 6-18 hours. When used intravenously, weaving and floundering may injure pigs and the depression period is shorter. While Nembutal is known to be irritating to tissues it has caused no noticeable effects when administered deep into the musculature of a large number of sows.

Preventive measures are largely concerned with providing quiet farrowing quarters to which the sow is accustomed. The sow should be introduced to the farrowing pen several days before parturi-

tion is anticipated. The caretaker should be cautious about noisy distractions from the time the sow begins to labor. Sow hysteria is uncommon in the sows that prepare their own secluded nest and farrow on pasture. The selection of quiet strains of sows is recommended. The incidence of this trouble seems higher in gilts.

The placental membranes and dead pigs should be removed promptly. When infrared heat lamps are used the warmth seems to quiet the sow as well as the pigs.

Owners should be cautioned to provide a ration including adequate protein and avoiding excess corn. Rations to pregnant sows are often faulty in this respect. However, the importance of a defective ration in sow hysteria is indistinct. Often only one sow in a herd is so affected. This causes hesitation in incriminating a ration that is common to all.

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dren in Vienna; instead, they keep dogs.

In the western half of Austria, the farmers are relatively poor and keep only a few animals, perhaps 2 or 3 cows and 2 to 10 pigs. It is extremely difficult for a veterinarian to make calls to these farms, especially those which are located high on the mountainsides. It is frequently impossible for the veterinarian to collect fees from these farmers that will maintain a satisfactory practice. In the eastern half of Austria the land is better and the animal herds are larger. The farmers have more wealth and veterinarians earn a better living. In no respect, however, should the living of the Austrian veterinarian be compared with that of the American veterinarian.

In general, the veterinary profession in Austria enjoys a good reputation and modest income. The profession appears to be well trained in basic veterinary medicine, but there is a great need for information on medical advances made during the last decade, especially in the field of therapeutics.