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Horses, Dogs and Flying

If variety is indeed the spice of life, then the Edwin A. Churchills can properly be described as having a well-garnished life style! While many of us are content to develop one or two major facets of work in our lifetime, the Churchills have parlayed a variety of interests into an amazingly full and productive life, including veterinary medicine, judging of show dogs, breeding a number of different animals, and flying. Dr. Churchill's professional contributions over more than four decades have embraced teaching, helping to found a major specialty group for the development of an equine hospital and a large practice, while Mrs. Churchill has combined an avid interest in flying with many other activities including Ed's practice.

Dr. Churchill's hospital is located in a clearing on a 135 acre property which is mostly wooded and borders on the beautiful Bohemia River just outside of Chesapeake City, Maryland. The estate is known as Spenrock, which derives from two farms previously owned by Mrs. Churchill (Rock Maple Farm in Massachusetts and Spencers Landing Farm in Centreville, Maryland). Ed located at Spenrock in 1967 and built the hospital in 1969. The one story building contains twelve stalls for hospitalizing horses, a surgical suite, and an office. Dr. Churchill is assisted in the practice by Dr. Dan Hawkins, a Texas graduate.

While Dr. Churchill sees all types of equine problems in his practice, a majority of the cases involve diagnosis and possible surgery of leg problems. Since his days at the School of Veterinary Medicine, Ed states that one of his primary interests is in "determining the *why* of lameness in the horse." He believes that he is not rendering his clients a complete service merely by diagnosing the nature of the lameness but that he must delve into determining the cause. This approach was instilled in Dr. Churchill by Dr. William Lee, who was Professor of Surgery at the Veterinary School during the 1940s.

Dr. Churchill is also a firm believer in preventive medicine. During the winter he travels to Florida on a monthly basis to examine young, developing horses. His objective is to forestall problems before they occur.

Ed's practice involves primarily Thoroughbreds and Standardbreds on about an equal basis. In discussing the performance of horses, Dr. Churchill pointed out that while Thoroughbreds have not greatly improved their racing times since the period of the superhorse, Secretariat, Standardbreds have made great strides during the past three decades. He believes that three main factors account for the improved performance: better tracks, better equipment, and a very definite improvement of breeding lines.

Dr. Churchill graduated from the School of Veterinary Medicine in 1941. In 1944 he was appointed assistant professor of veterinary surgery and obstetrics. Among his duties he was in charge of radiology. When Dr. William Lee retired in 1948, Dr. Churchill was promoted to associate professor and assumed responsibility for the Large Animal Clinic. He played a key role in initiating work which steered equine surgery and radiology into the modern era. He left the School in 1950 and practiced in Centreville, Maryland, before moving to Spenrock.

Dr. Churchill's interest in horses stems from early childhood when he "worked free for a horse gypsy for the privilege of riding his horses." While a student in Veterinary School, Ed conducted a riding school in the Pocono region.

In a retrospective mood, Dr. Churchill stated that "veterinary medicine has become almost an entirely new science during the last 35 to 40 years." While he views the introduction of aseptic surgery (in the 1940s) and the development of antibiotics as playing major roles in our progress, he believes that the vastly improved educational system is the major factor. Dr. Churchill was a founding member of the American College of Veterinary Surgeons in 1965.

The other member of this intriguing team is Mrs. Churchill (Jan), whose career has included everything from being Master of the Hunt at Groton, Massachusetts, and breeding Angus cattle to flying as captain on a regular commercial airline. Mrs. Churchill, who has been flying for eighteen years, currently pilots the two aircraft which are used by Dr. Churchill on his winter trips to Florida and to other locations for his practice. One aircraft, a twin engine, is kept at Greater Wilmington Airport in Delaware and the other at a small airport near Spenrock. Mrs. Churchill's aeronautical experience stems from flying on the airplane owned by Mr. Stanley Dancer, noted driver and breeder of Standardbreds, when the pilot would allow her to "take the controls." She progressed to piloting on a commuter airline, and has flown planes as large as the 727 and the monstrous C-5. She is especially interested in World War II planes, and in 1983 won the Grandchampion Warbird award at the major airshow in Oshkosh, Wisconsin.

Mrs. Churchill has bred an outstanding line of Labrador Retrievers for the past twenty years under the name Spenrock Kennels. She is very outspoken in her belief that the Labrador can combine premier show qualities along with top field performance. She started her line with an outstanding bitch of English ancestry, International Champion Spenrock Banner W.C. She writes a regular Labrador Column for the American Kennel Club *Gazette*, and prepared a chapter in the text, *Book of Labradors* (Ed., Anna Katherine Nicholas). Mrs. Churchill frequently flies to judging assignments at dog shows and on occasion transports her own or other dogs. She lectures at educational seminars for judges in various parts of the country.

Prior to her interest in Labradors, Mrs. Churchill bred German shepherds, Rottweilers and corgis. In addition to her early involvement with Angus cattle and Berkshire pigs, she has been involved in breeding Thoroughhred race horses.

—John E. Martin, V.M.D.

Penn Hypertensive Dogs

Hypertension, or high blood pressure as it is commonly called, is a medical problem frequently seen in humans. "In people, high blood pressure causes disruption of blood vessels, peripheral vascular disease, and damage to kidneys, heart, and brain," said Dr. Kenneth Bovee of the University of Pennsylvania School of Veterinary Medicine. "In animals we have not seen the extensive damage to organs or the peripheral vascular disease. But hypertension can cause blindness in dogs due to bleeding in the eye and to retinal detachment."

Dr. Bovee explained that there are two kinds of hypertension. "Essential hypertension, which is probably hereditary, has no apparent underlying cause and appears during middle age. There is also secondary hypertension, which is due to primary disease such as abnormal metabolism of the kidneys or endocrine organs." Secondary hypertension can be corrected if the underlying disease is identified and treated. High blood pressure takes a toll on the body and its organs. Blood vessels undergo a continual pounding, they scar, break down, and become stiff, restricting the blood flow. Peripheral vascular disease and eventually damage to major organs results. The damage caused by hypertension appears to be more severe in man than in animals. "We have found some damage, but not nearly as extensive as can be seen in humans."

At VHUP, dogs with endocrine and kidney diseases are now screened for secondary hypertension. Dr. Bovee and Dr. Meryl Littman are also in the process of characterizing diseases which cause secondary hypertension in dogs.

For a number of years now, Dr. Bovee bas been studying hypertension in dogs with an emphasis on primary hypertension. "A few years ago a five-year-old German shepherd/Labrador retriever mix dog was presented because of acute blindness," he said. "The dog had bleeding in the eyes and retinal detachment. His blood pressure was 275/160."

The dog had no other disease and it was concluded that his hypertension was primary. "We studied him and found that the pressure could be reduced through medication. Unfortunately, the disease had progressed too far, and his vision could not be saved." The dog was donated, and he was the beginning of the Penn Hypertensive Dogs, a colony of animals with spontaneously occurring primary hypertension. A female with a similar condition was located at Michigan State University, and the mating between the pair resulted in seven puppies. A number of these had hypertension. They were bred

back to their parents and offspring with hypertension resulted. "The disorder is hereditary, and we now have an animal model of spontaneously occurring primary hypertension which will allow the study of the disease," Dr. Bovee said. "There is only one other animal model: rats which have been bred for 30 generations in Japan. A dog model will allow researchers to extend the study of the disease further and perhaps open avenues for new approaches to diagnosis and treatment."

Dr. Bovee explained that it is difficult to measure blood pressure in dogs as it is extremely labile. "Strange surroundings or a visit to the veterinarian can raise it. To get proper readings, the animal has to be trained to tolerate the pneumatic cuff or the fine needle used to measure direct pressure," he said. "Also the cuff presents a problem because the dog's leg is shaped irregularly, not permitting even pressure which must be applied." The technique used at VHUP is to take direct pressure measurements. "A fine needle, connected to monitoring equipment, is inserted into the femoral artery. This gives us the blood pressure." In order to do this, the dogs have to be trained to lie still. "Usually, when the puppies are about six months old, they are trained enough for us to take pressure readings. It is a quick procedure and it is painless."

Dr. Bovee explained that a dog is regarded hypertensive when the systolic pressure is at least 160 mm Hg and the diastolic pressure at least 120 mm Hg when dogs are untrained. "In the dog, clinical signs will not manifest themselves until the animal is at least five years of age or older," he said. "Then one begins to see the retinal changes." He pointed out that if hypertension is diagnosed early enough, the dog can be treated with drugs to avoid excessive damage to the retina, and vision can be preserved.

Hypertension in dogs is poorly understood. Blood pressure is controlled by 20 to 30 different factors. "When people take medication, often only a few factors are affected, and some adversely. That's why many blood pressure medications have undesirable side effects."

Dr. Bovee's study, which is supported by funding from NIH, should shed more light on primary hypertension. He feels that the Penn Hypertensive Dogs can contribute much to the knowledge about the disease and tbat this may lead to better diagnostic and treatment methods for man and dog.

Dr. Kenneth C. Bovee is the Corinne R. and Henry Bower Professor of Medicine (Nephrology) and Chief, Section of Small Animal Medicine, at the University of Pennsylvania School of Veterinary Medicine.