

GRUNFELD GERMAN SHEPHERDS

Looking at Hips — How Various Organizations Do It An Overview and Summary

by Fred Lanting

In the course of my judging and lecturing all over the globe, I naturally see variability in how much emphasis is placed, by breeders and buyers, on orthopedically sound hips. I also see some variation in attitudes and techniques in the veterinary profession. For example, when I taught one vet in Pakistan how to position dogs and read the films to look for degenerative joint disease (DJD), we had to sneak in the side door of an M.D.'s clinic so we could use *his* radiography equipment. Hardly any vets have anything of their own. We had to do it surreptitiously because that is an officially Muslim country and dogs are religiously “unclean” and some believe they are cursed or defiled if they have any contact with dogs.

Since the 1950s, there has been a growing awareness of the genetic nature of HD (hip dysplasia, often called CHD or canine HD by vets in order to distinguish it from HD in man and other species, although very little difference exists). In the mid-1960s, several organizations almost simultaneously arose to register and attempt to control the disorder.

In North America, the OFA (Orthopedic Foundation for Animals) was established with Dr. Wayne Riser as first director; in Germany, the effort was spearheaded by the SV, the club for German Shepherd Dogs; in Great Britain,

the BVA took it over. Shortly thereafter, Canada, Australia, and others jumped onto the bandwagon. Before the 1930s, only the ability of a dog to work all day was a key (and tiny hint) to its hip joint quality.

Initially, it was easy to see that the most severe cases, which involved pain and loss of utilitarian function, were paralleled by a radiographically demonstrated deterioration of the articulating surfaces in the ball-and-socket hip joint.

It was also discovered almost immediately that excess joint space was another indication of the pathology.

But laxity (looseness) in the joint, especially as estimated early in the dog's life, was not as directly proportional or parallel to the eventual worsening of the disease and symptoms. Some younger dogs look normal and tight in the “standard” AVMA (American Veterinary Medical Association) position, yet have a bad genotype that comes to light only in later maturity or in the progeny. In that respect, the disorder is developmental and progressive.

What has been the standard view for the past 40 or 50 years is a picture taken from above, with the dog on its back and legs stretched out parallel to each other and the table, and the film cassette in a drawer under the dog's pelvis.

This is the best view for seeing most of the deterioration that occurs as a result of the loose wobbling around done in actual motion, but it is a highly inaccurate method of determining probable genotype, or relative risk of later deterioration.

But it was all we had, radiographically speaking, for those many decades. And all too often, a dog that looked OK in this

position was bred and reproduced its bad genes before its true hip quality became apparent. Only some wiser vets and breeders used “puppy palpation” at roughly 8 weeks, and the “wedge X-ray” at some age over about 6 months.

In humans, the hip dysplasia disorder is obvious at birth, and babies are put into a type of splint that keeps the legs far apart and the femoral heads pushed deep into the acetabular sockets until the joint begins to develop more or less normally. In quadrupeds, this is not feasible, perhaps even impossible. Animals start walking and putting weight on the joints almost immediately, and are simply not carried around during such a long adjustment period. Furthermore humans are much more developed skeletally than puppies during those first days. With dogs, our emphasis should be primarily on prevention through genetic selection, culling from the gene pool those that do not look better than average, and therefore a superior early detection method than what has been practiced in the past. Breeders must be held responsible for their “products”.

Attempts at improving early detection/recognition/prediction of hip quality included the techniques of palpation (feeling the joint while manipulating the limb). The two main methods were the Ortolani and the Bardens methods, similar to each other. The Ortolani maneuver involves pushing the femur in such a way that the loose femoral head slides up and out of the socket, then is allowed to “snap” back into place. The “click” is audible and can be felt easily with the fingers. This Ortolani sign is still widely used as one of several procedures done on the same animal brought in for a full evaluation. The Bardens technique differs slightly, but the practitioner lifts the femur laterally from the pup

that is lying on its side, while the thumb and forefinger of the other hand are used to estimate laxity in millimeters and compare one pup to the others. It was very useful in the days before the PennHIP distraction technique, but is only occasionally used in some veterinary college research today.

For an uncomfortable number of years, the barely adequate hip-extended technique was used almost exclusively by vets in those countries named above, as well as others. In the late 1980s, a great improvement over the “wedge” or “fulcrum X-ray” was developed at the same university where OFA was born, U. of Pennsylvania in Philadelphia.

Before long, scores of thousands of dogs had been analyzed by this improved technique, and a reliable *early*

(4-6 months age) prediction of relative risk of developing DJD later, was a reality. A Godsend, really, for the breeders who wanted to know before they put much time and money into training and waiting for the young dog to grow old enough to breed and/or work.

Today, the hip-extended method is obsolete as far as a useful early predictor of HD is concerned, and the PennHIP (Pennsylvania Hip Improvement Program) method is used to forcibly distract (separate the components of) the loose hip joints while a picture is taken to compare with the deeply-seated view. This gives an objective picture (measurable in millimeters and plugged into a formula) of the true looseness, what I call covert laxity. It is far superior to the subjective estimate of laxity, partly due to that formula, which makes measurements on a Beagle proportional to the measurements on a Great Dane. Thousands of vets have taken the qualifying course to become certified, and can be found on the www.vet.upenn.edu/pennhip website. Breeders are increasingly turning to this for the most accurate, reliable, and early determination of probable genotype. Combined with progeny testing like the SV's "Zuchtwert" program or The Seeing Eye, Inc.'s Breed Value system (the same at heart), PennHIP can give breeders and buyers an enormous advantage in safety, savings, and improvement of their breeds. HD and other orthopedic disorders are genetic (you don't "get" it unless you have "bad genes"), and therefore the two best ways of making a close guess as to the dog's genotype are through this vastly improved diagnostic technique

(PennHIP), and (where available) the Zuchtwert calculations. Unfortunately, where one is widely used, the other is not, and vice-versa. It is my practice to use both, and my dream that the two will in my lifetime be coupled to the advantage of the fancy, the breeds, individual dogs, and the sport.

FL April 2004

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