

# CHIHUAHUAS & THE MOLERA

by LAUREN PAYNE

**M**any a Chihuahua breeder has fielded a call from a panicked new puppy owner after bringing the puppy to the veterinarian. After examining the puppy, the veterinarian explains to the puppy owner that his/her puppy is hydrocephalic because it has a “hole in its head”. The veterinarian may go on to explain that the puppy will not have a healthy, normal life and they should return it to the breeder immediately. The heart broken, and often confused, puppy owner calls the breeder and a length conversation ensues.

So, what is the molera? The molera, or fontanel, is a soft spot on the skull where the frontal and parietal bones have not completely fused. Infants and most puppies are born with a fontanel. As they grow, the bones in the skull ossify and completely close. In infants the fontanel on the back of the head typically closes within the first few months; the fontanel on the top of the head closes at seven to nineteen months of age. In other breeds of dogs, the fontanel typically closes within the first four to six weeks, though sometimes as late as six months.

With Chihuahuas, the fontanel may never close. The size and shape of the molera varies dog to dog. Most breeders typically report the fontanel as the size of a dime or smaller. Estimates for the number of Chihuahuas with a molera range from fifty to eighty percent of the population—though no complete study has been performed. In a preliminary survey, the Chihuahua Club of America reported that only “15.7% of moleras had closed by eighteen months, but thereafter, over 50% closed. 1.6% remained nickel-sized or over at eighteen months of age. Some may take up to three years to close and others may never close.”

Some believe that the mere presence of a molera or just the apple dome head type means the dogs have hydrocephalus. According to Przyborowska et al (2013), “The enlargement of cerebral ventricles and asymmetry observed in those breeds are independent of the head shape.” And, in an older study, Greene and Braund (1989) found that “Many clinically normal... dogs also may have open fontanelles without associated hydrocephalus.” Thus, one cannot assume a Chihuahua with a domed head and molera is hydrocephalic.

Now of course there are on occasion Chihuahuas who do have hydrocephalus. Hydrocephalus is an abnormal accumulation of cerebrospinal fluid in the skull; it is classified as either internal if the cranial ventricles are enlarged or external if the subarachnoid space. It is not considered a disease, but a multifactorial disorder with a variety of symptoms and can only be definitely diagnosed via ultrasound, CT scan or MRI. Symptoms include “altered mental states ranging from depression to hyperexcitability, disturbed consciousness, visual and auditory impairment, incoordination, circling, seizures, as well as symptoms such as dilated and fixed pupils, blindness, ventro or ventrolateral strabismus and abnormal

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shape of the skull,” Przyborowska et al (2013). Hydrocephalus can be congenital or acquired. In congenital cases, the causes include genetic factors, developmental anomalies, prenatal infection or bleeding in the brain. Affected dogs are often smaller than average with skull disproportionate to its body, suggesting a correlation between body weight and the volume of the cranial ventricles.

The Chihuahua Club of America has adopted a statement on the molera to educate the general public and many Chihuahua breeders themselves have statements on their kennel websites. The molera is a feature of the breed and was once considered a mark of purity.

Even today it is mentioned in numerous breed standards. The American Kennel Club, Canadian Kennel Club and New Zealand Kennel Club breed standards all mention the molera under the description of the head: “A well-rounded ‘apple dome’ skull, with or without molera”. And, while the current Australian National Kennel Council (ANKC) standard does not mention it, the pre-1987 ANKC included “with or without molera” in the description of the breed’s head type. The Extended Breed Standard of the Chihuahua developed by the National Chihuahua Council in conjunction with the ANKC discusses the molera under the description of head type, explaining that the presence or absence of the molera is irrelevant to judging and judges should not feel for it.

Interestingly, the Fédération Cynologique Internationale (FCI) has a different take. A 2004 standard describes the head as “preferably without a fontanel although a small one is allowed” but the most recent standard calls consider the open fontanel a disqualifying trait. My understanding is that the disqualification is not consistently enforced by judges at FCI shows and, in some countries the kennel club and

breeders disagree with including it as a disqualification.

So while some voice concern that a Chihuahua with a molera is at a greater health risk than one without—I once had a veterinarian tell me he felt all Chihuahuas should wear a helmet, the health risk is unfounded. Chihuahuas are a healthy, hearty breed that typically lives for thirteen to sixteen years; some breeders have known a dog or two who lived to twenty! Having a molera alone does not impact the lifespan of the dog. This spunky little breed should be enjoyed whether as pet, show or even performance dog. ■

#### ABOUT THE AUTHOR



*Lauren grew up at dog shows. She bred and showed Chihuahuas, and also worked for a professional handler for five years, showing working and herding breeds. During high school, she worked in the kennel at a veterinary clinic. After finishing her Bachelors degree, she worked as veterinary technician for 3½ years before returning to school to complete her MS in Counseling. Lauren met Dr. Morris while organizing a breeding clearance clinic and started working part-time as a technician in the fall of 2010. While she no longer shows and breeds dogs, she is still active in the dog show community and a member of multiple dog clubs. She is licensed to judge Chihuahuas, Min Pins and Junior Showmanship and occasionally assists the local 4-H dog club teaching showmanship. Prior to coming on board full-time at MVCS, she worked for the Center for Public Policy and Social Research at Central Connecticut State University as a Research Specialist. She lives in Connecticut with her husband, son, two cats (Brutus and Nefertiti) and German Shepherd (Magnolia).*

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