Greater Swiss Mountain Dog Club of America Breed Health Survey 2000 & 2001

GSMDCA Health Committee
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ABSTRACT

PURPOSE: The purpose of this survey was to determine the health status of Greater Swiss Mountain Dogs (Swissys) in the United States. METHODS: Swissys living for any portion of 2000 and 2001 were eligible. A two-page questionnaire was made available to Swissy owners on-line or through the Greater Swiss Mountain Dog Club of America newsletter between March and July 2002. RESULTS: A total of 846 valid entries were submitted. Of the 846 entries, 775 (91.6%) were alive at the time of entry and 71 (8.4%) had died. The Swissys that were living ranged in age from 7 to 146 months (12 years, 2 months), with a median age of 42 months. For Swissys that had died, the age of death ranged from 1 to 157 months (13 years, 1 month), with a median of 81 months (6 years, 9 months). The three most common known general causes of death, together accounting for approximately 70% of the deaths, were cancer (26.8%), gastrointestinal conditions (21.4%), and neurologic conditions (21.4%). The most common specific causes of death were gastric dilitation-volvulus (bloat) (6 Swissys), unspecified cancers (4), seizures without a cause (idiopathic epilepsy) (5), splenic torsion (4), and unspecified seizures that may or may not represent additional deaths from idiopathic epilepsy (3). The most common conditions reported were: distichiasis (19.4%), licking episodes (17.3%), urinary incontinence (11.0%), umbilical hernia (9.6%), pica (9.1%), hip dysplasia (9.1%), cystitis (8.0%), seizures without a cause (idiopathic epilepsy, including fly-snapping) (5.9%), osteochondritis dissecans (5.4%), food allergies (5.4%), irritable/inflammatory bowel syndrome (5.1%), gastric dilitation-volvulus (bloat) (5.3%), panosteitis (4.7%), skin allergies (4.6%), elbow dysplasia (4.4%), splenic torsion (4.4%), cataracts (4.3%), crooked tail (3.7%), chronic ear infections (3.3%), and entropion (2.8%). The most common descriptions of Swissy temperament were very friendly (67.6% of Swissys), confident (49.9%), and protective (31.4%). Potentially dangerous temperament characteristics were reported as follows: dog aggressive (7.0%), aggressive (1.8%), has bit a person (1.8%), and rage syndrome (0.4%). CONCLUSIONS: Swissys, like other large breed dogs, are relatively short-lived, although some do live to 12 or 13 years of age. Bloat, epilepsy, and splenic torsion are among the most common and fatal health conditions exhibited by Swissys. Cancers, while not common overall, were among the most common causes of death. Of the remaining common conditions, some have an impact on the quality of life of the Swissy (hip dysplasia, for example), others also have an impact on the quality of life of owners (urinary incontinence, for example), and some typically have little impact for Swissy or owner (distichiasis and crooked tail, for example). Although a majority of Swissys were described as “very friendly,” the presence of Swissys described as having potentially dangerous temperament characteristics reminds Swissy owners and breeders of their responsibility to breed and raise Swissys in ways that promote temperaments and behaviors appropriate to stable working dogs and safe family pets.

Data analysis and manuscript preparation by Health Committee member Beth Domholdt Shoemaker, PT, EdD
Photo: Paradise Enterprising August, CD, owned by Beth and Gary Shoemaker

PURPOSE

The purpose of this breed health survey was to determine the health status of Greater Swiss Mountain Dogs (Swissys) living in the United States during 2000 and 2001. Descriptive data from the survey were summarized and reported by the Greater Swiss Mountain Dog Club of America (GSMDCA) Health Committee. Estimates of disease gene frequencies will be generated in 2003 by veterinary consultant George Padgett, DVM, from information collected through the survey.

METHODS

Subjects and Instrument

Swissys living for any portion of 2000 and 2001 were eligible. Our consultant estimated that 650 entries would be needed to be able to generate valid disease gene frequencies. A two-page questionnaire was designed by the Heath Committee, in consultation with Dr. Padgett.

Procedures

Data collection was done over a 4-month period from March 15, 2002 through July 15, 2002. The questionnaire was made available to Swissy owners in two formats. The on-line format enabled owners to enter data electronically. The on-line format was announced in mid-March through two different on-line forums of interest to Swissy fanciers. In addition, a link to the on-line survey site was made available at the web site of the GSMDCA. Frequent reminders to participate in the survey were distributed through these on-line forums. A final push for submission of on-line entries was made in late June by sending an e-mail survey reminder to all GSMDCA members for whom the membership secretary had a valid e-mail address. To ensure that the survey was available to all members regardless of their access to the Internet, a hard-copy format of the questionnaire was reproduced in two issues of the club newsletter. Completed hard-copy questionnaires were sent to a member of the Health Committee who entered them into the on-line format.

Data Analysis

First, the data set was checked for duplicate entries. Duplicates were eliminated if, in addition to having the same items checked across the survey, they also had identical narrative comments. Eleven duplicate entries were not eliminated; these duplicates had the same items checked throughout, but no comments that would help determine whether they represented a single Swissy or different Swissys with the same health information. All of these possible duplicate entries had very few conditions and none had histories of rare conditions. Therefore, we chose to err on the side of including this small number of possible duplicates.

Second, the narrative sections of the survey were categorized. Narrative responses were requested for cause of death, for detailed information on a limited number of diseases or conditions, for “other” conditions in each survey category, and in a final “additional information” category. Two members of the Health Committee with health care backgrounds (a veterinarian and a physical therapist) reviewed the comments and made decisions about categorizing the information. Comments that did not add information beyond what was already checked were eliminated. Comments related to variations in conformation (e.g. overbite, cow-hocked) were also eliminated.

Third, response patterns across 5 different dates were examined to test for the systematic biases that can be introduced when using non-random sampling. The 20 most common diseases or conditions were compared across
5 different dates during the data collection period. The difference between the highest and the lowest calculated percentage for each condition was compared against the mean percentage across the 5 dates to give a “percent change” indicator of the stability of survey responses across the data collection period.

Fourth, the demographic variables (including reproductive status, age of Swissys living at the time of the survey, age of Swissys that had died, and causes of death) were summarized. For the age variables, the median (the middle point of the data set) was calculated.

Fifth, we computed a summary variable by adding up the number of health conditions marked for each Swissy, excluding the coloring conditions and the reproductive conditions. Means and medians were then calculated for the total group and various subgroups.

Sixth, descriptive analyses were conducted for each condition. The frequency (number) and percentage of Swissys with each condition (except the female and male reproductive conditions) were calculated for all Swissys in the data set. To give a sense of how the conditions were distributed across the lifespan, the complete data set was divided in fourths according to age at the time of the survey or age at the time of death. Because the survey did not ask for the age of the Swissy at the time a condition developed, the breakdown by age—while interesting—does not give definitive information about when the condition typically develops. For example, a pattern whereby younger Swissys have a history of the condition far more often than older Swissys may mean that Swissys with that condition do not survive into old age. However, it can also mean that the condition is more common today than it was previously or that the condition is diagnosed more often today because of enhanced awareness or improved diagnostic techniques. Conversely, a pattern whereby older Swissys have a history of the condition far more often than younger Swissys may mean that the disease does not develop, or does not become symptomatic, until old age. However, it can also mean that the condition is less common today than previously or that diagnostic criteria have changed in recent years and narrowed the definition of the condition.

For some conditions, the frequencies and percentages are reported for various subgroups. The percentage with reproductive conditions that apply to all females or males regardless of whether or not they have been bred (for example, vaginal infections and undescended testicles) was calculated based on the total number of females and males, respectively. For reproductive conditions that only apply to Swissys with attempted breedings (for example, difficulty whelping and sterility), the percentage was calculated based on the number of females and males with attempted breedings. The percentage with the orthopedic conditions of hip dysplasia, osteochondritis dissecans, and elbow dysplasia was calculated for the sample overall and for the subgroups with hip, shoulder, and elbow radiographs, respectively. Additional subgroup comparisons are described within the body of the results.

For some of the subgroup analyses, we used statistical tests to help determine whether there were significant differences among the subgroups. The tests we used were the independent *t*-test and analysis of variance for differences between means and the chi-square test for differences between frequencies. In brief, statistical tests enable researchers to determine which differences among subgroups are likely to be due to chance (nonsignificant differences) and which are unlikely to be due to chance and can be inferred to represent “true” differences among groups (significant differences). For this report, probabilities less than .05 (5%) were considered to represent significant differences. In some cases, generally when analyzing conditions that had low prevalence rates, the statistical tests were not valid because the mathematical assumptions required of the tests were not met. In general, the statistical probabilities (*p* values) are reported only when a significant difference was identified or when a seemingly large difference was not statistically significant.