Idiopathic Nasodigital Hyperkeratosis in Dogs:

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Abstract: Idiopathic nasodigital hyperkeratosis (INH) is a visually distinctive disorder in dogs with a typical history and that are otherwise healthy. INH was diagnosed in 35 dogs, accounting for 0.4% of the canine dermatology cases and 0.1% of the canine hospital population over an 11-year period. English bulldogs, miniature poodles, miniature schnauzers, American cocker spaniels, and Doberman pinschers may be predisposed. Most dogs (71.4%) had only nasal involvement. The condition is usually asymptomatic, stable over time, and not reported to spontaneously resolve.

Key words: dog, idiopathic nasodigital hyperkeratosis

要 約: 鼻・趾端の特発性角化症は、特有の外観を呈する犬の疾患である。本症では特徴的な病歴を伴うが、皮膚以外には異常は認められない。過去 11 年間において 35 例の犬が本症と診断され、その来院頻度は犬の皮膚科症例では 0.4%で、犬の外来症例全体では 0.1%であった。イングリッシュ・ブルドッグ、ミニチュア・プードル、ミニチュア・シュナウザー、アメリカン・コッカー・スパニエル、ならびにドーベルマンは本症の好発犬種と考えられた。ほとんどの症例（71.4%）では、鼻部のみに変症が認められた。本症は無症候性で変症が永続し、自然覚解に関する報告はこれまでのところない。

キーワード: 犬、鼻・趾端の特発性角化症

Idiopathic nasodigital hyperkeratosis (INH) is a classic canine skin disorder first described by Dr. George Muller and Dr. Robert Kirk in 1969. It is most often described in older dogs, with no sex predilection, wherein it is presumed to be a senile change. Some authors believe that no breed predilections exist, while other authors believe that the condition is much more common in cocker spaniels, beagles, and basset hounds. INH produces varying degrees of dry hyperkeratosis – from ridged, to grooved, to feathered in appearance – on the nasal plane (Fig. 1), pawpads (Fig. 2), or both of these. Typically, the nasal hyperkeratosis affects the dorsal aspect of the nasal plane, sparing the rostral portion and the nostrils. The condition is typically asymptomatic – unless fissured or secondarily infected by bacteria or yeasts – and affected dogs are otherwise healthy. Remarkably, in spite of INH being a universally well-recognized condition, we are not aware of a single detailed publication concerning this entity.

A retrospective study was conducted on 35 dogs with INH examined by the Dermatology Service of the Cornell University Hospital for Animals (CUHA) over an 11-year period (1988 through 1998). Breed and sex data for the dogs with INH were compared to those for the general CUHA dog population for the same period using the relative risk (RR) calculation.

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An RR of 2.0 or greater was considered significant.

INH was diagnosed in 0.4% (35/8,207 dogs) of the canine dermatology cases and 0.1% (35/37,775 dogs) of all dogs examined at the CUHA. Fifteen different breeds and mongrels were represented. Only 7 breed categories had 2 or more individuals represented: American cocker spaniel (10), mongrel (4), English bulldog (3), miniature schnauzer (3), German shepherd (2), Doberman pinscher (2), and miniature poodle (2). English bulldogs (RR=14.3), miniature poodle (RR=9.5), miniature schnauzer (RR=9.5), American cocker spaniel (RR=7.5), and Doberman pinschers (RR=2.6) were over-represented. Males and females accounted for 57.1% (RR=1.2) and 42.9% (RR=0.8), respectively, of the INH cases, showing no sex predilection.

Age at disease onset was known for only 9/35 (25.7%) of the dogs, and varied from 4 to 9 years. The other owners could only say that the condition had been present for “some time” or “years”. Age at examination at the CUHA varied from 3.5 to 15 years. Most dogs (25/35, 71.4%) had only nasal involvement, with the rest (10/35, 28.6%) having both nasal and pawpad involvement. No dog had only pawpad involvement. As all dogs were otherwise healthy, no laboratory tests were performed. Follow-up information was available for 25/35 (71.4%) dogs. In these patients, INH was stable for 1 month to 8 years after in initial presentation.

To our knowledge, this is the first published study containing detailed information on dogs with INH. We report for the first time the prevalence of INH in a hospital population and a dermatology service, and possible breed predilection for English bulldogs, miniature poodle, miniature schnauzers, American cocker spaniels, and Doberman pinschers. We confirm the occurrence of INH in older dogs with no sex predilection, and report that the nasal plane is exclusively affected in the majority of dogs. The condition is typically asymptomatic, stable over time, and not reported to spontaneously regress. In dogs with a typical history and that are healthy otherwise, INH is a visually distinctive disorder.

References