

Incidence of Canine Hip Dysplasia : A Survey of 272 Cases

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Abstract

A total of 272 cases of hip dysplasia were reviewed. A review of clinical cases presented with the clinical signs of hip dysplasia were referred to Radiology Unit of Madras Veterinary College, from May 2007-April 2009 was taken for this study. The incidence was highest in young animals of age group over three months to one year (52.94 percent). The breed-wise incidence was more common in Labrador Retriever (36.76 percent). Male dogs were found to be more affected (59.55 percent) than female dogs. Bilateral hip dysplasia was found to be more (88.60 percent) than unilateral. Among the unilateral hip dysplasia, left side was found to be more (54.83 percent) than right.

Keywords: Hip Dysplasia, Nutrition Imbalance, Canine, Radiology.

Introduction

Hip dysplasia is one of the most common orthopaedic diseases in dogs, which leads to chronic pain and functional impairment (Remedios and Lfries, 1995). It is considered as an inherited, developmental disease with a polygenic mode of inheritance, which affects the coxofemoral joint of larger and rapidly growing breeds (over 12kgs). The factors influences to develop this condition are complex genetic (25% to 85%), environmental, nutritional status, rapid growth, dietary anion gap and inutero endocrine (Hedhammer et al., 1979). Hip joint laxity is considered as a major risk factor leading to abnormal weight bearing forces and subsequent development of osteoarthritis (Remedios and Lfries, 1995). Radiographic assessment is the superior technique for diagnosing the canine hip dysplasia (Kealy, 1987). This retrospective study was undertaken to analyse the incidence of hip dysplasia in dogs.

Materials and Methods

A review of clinical cases presented with the clinical signs of hip dysplasia were referred to Radiology Unit of Madras Veterinary College, from May 2007-April 2009 was taken for this study. All the available records and radiographs were screened and the information regarding the incidence of hip dysplasia was included. The standard ventrodorsal radiographic view of the pelvis with rear limbs extended symmetrically and rotated inward to center the patellas over the trochlear grooves.

Results and Discussion

A total of 272 cases of hip dysplasia were recorded during the period of this study. The breed-wise incidence of the hip dysplasia was more common in Labrador Retriever (36.76 percent) followed by Alsatian (25.60 percent), Great Dane (9.19 percent), spitz (6.61 percent), Golden Retriever (4.77 percent), Rott welier (4.41 percent), Doberman Pinscher (2.94 percent), non-descript dogs (2.20 percent), St. Bernards and Lapsopso (1.83 percent each), Neopolitan Mastiff (1.47 percent), Dachshund (1.10 percent) and others (1 percent). Among the breeds, Labrador Retriever had highest incidence. This might be due to heavy body weight and size of the breed or decreased sizes of total pelvic musculature (pectineus muscle) surrounding and acting on the hip joint. In dysplastic dogs the pectineus muscle causes tension in a direction and the force tends to pull the head of the femur away from the acetabulum. Tight muscle creates more looseness in the joint. This was in accordance with the findings of Priester and Mulvihill, (1972).

Age-wise, the highest incidence was found in the age group of over three months to one year (52.94 percent), followed by over three year to six years (17.27), over one year to three years (14.70 percent), over six year to nine years (7.35) and above nine years (7.35 percent) respectively. The highest incidence rate of above three months to one year in the present study was similar to the observations of Riser, (1993).

Male dogs were found to be more affected (59.55

percent) than female dogs. This finding was in accordance with the findings of Jayaprakash, et al., (2007).

In this study bilateral hip dysplasia was found to be more (88.60 percent) than unilateral. Among the unilateral hip dysplasia, left side was found to be more (54.83 percent) than right. In most cases, dysplasia will occur bilaterally and approximately 7% occurs unilaterally.

Larger breeds are most susceptible (50 %) but any small and medium sized breeds are also susceptible to this condition. The optimum time of radiography to be taken is five or six months of age. The primary complication of hip dysplasia is development of osteoarthritis or degenerative joint diseases and the secondary complication is dislocation of hip with minimal trauma. Conscientious breeding is vital to decrease the occurrence of this devastating disease. Male and female dogs before breeding, the hip should be evaluated for dysplasia. Dysplastic dog should not be bred.

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