

# Hip dysplasia in a Labrador dog and its management

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**Abstract-** A 2.5 year old male Labrador retriever dog was presented to Teaching Veterinary Clinical Complex with history of abnormal gait, difficulties in jumping, intermittent lameness in its hind legs, reluctant to rise up stairs and exercise intolerance. The case was suspected for hip dysplasia on the basis of history, clinical signs, physical examination and palpation of hip joint. Radiographic examination revealed subluxation of the femoral head and increased angle of femoral neck inclination. The case was successfully managed by chondro-protective agent, non-steroidal anti-inflammatory drugs (NSAID), weight reduction and exercise restriction.

**Index Terms-** Hip dysplasia; dog; glucosamine; chondroitin sulphate

## I. INTRODUCTION

Canine Hip Dysplasia (CHD) is the abnormal development of the coxo-femoral joint characterized by subluxation or complete luxation of the femoral head in young animals and mild to severe degenerative joint diseases in older animal [1]. This developmental abnormality is mostly influenced by genetic, nutritional and environmental factors [2, 3]. This biomechanical disease can be diagnosed by history of stilted or abnormal gait that worsens with exercise, and causes difficulties in jumping or sitting. The diagnosis is made based on history, clinical signs, palpation of the hip joint and confirmed by radiographs. Treatment of hip dysplasia can be conservative or surgical. The objectives of conservative therapy are to relieve pain, stabilize the hip joint, improve mechanical joint function, and slow down the progression of the disease and to bring the dog to normal or nearly normal level of activity. Analgesics, chondro-protective agents, weight reduction, and exercise restriction have been employed to minimize the clinical signs of pain.

Hip dysplasia is the most common skeletal disease in dogs that has been recorded in over 82 recognized breeds of dogs. However, it is commonly seen in large breed dogs such as Great Dane, German shepherd, Labrador retriever, Golden retriever etc. [4, 5] (Leighton, 1997 and Swenson *et al.*, 1997). The present report describes a clinical case of hip dysplasia in a Labrador dog and its therapeutic management.

## II. MATERIALS AND METHODS

A 2.5 years old male Labrador dog weighing 30 kg was presented to Teaching Veterinary Clinical Complex, with history of abnormal gait, difficulties in jumping, intermittent lameness in

its hind legs, reluctant to rise up stairs and exercise intolerance. Physical examination, Palpation of the hip joint and radiographic examination was done. Blood was collected using EDTA anticoagulant and examined for complete blood count.

The dog was treated with Tab petjoint<sup>a</sup> (1 tab orally twice daily for one month followed by 1 tab orally daily for one month) and Tab dolocarp<sup>b</sup>-50mg (1 tab twice daily orally for a week). The owner was advised to maintain the dog in a non-slippery floor, provide moderate exercise like walking on treadmills, slow jogging and swimming regularly with restriction of strenuous exercise, jumping and rising up stairs.

## III. RESULTS AND DISCUSSION

Physical examination revealed dullness and depression with narrow stance in the hind limbs (back legs unnaturally close together), pain in hip joints on percussion and decreased range of motion in the hip joints. Palpation of the hip joint revealed subluxation in the joint and pain during extension, external rotation and abduction. The dog was placed in dorsal recumbency with rear limbs extended symmetrically and rotated inward to centre the patellae over the trochlear grooves for radiography. This examination confirmed the subluxation of the femoral head and increased angle of femoral neck inclination (Figure-1). Haematological values revealed mild leucocytosis and neutrophilia which may be due to mild bacterial infection (Table 1). The case was diagnosed as hip dysplasia from the above history, clinical findings, physical and radiographic examination.

In the present case, after 15 days of treatment, condition of the dog was improved with increased activities and there was no pain on palpation of hip joint. After one month of treatment, the lameness was dramatically reduced and after 2 month, the dog had a normal gait, posture and no difficulties in getting up and lying down with decreased angle of femoral neck inclination.

Hip dysplasia cannot be cured completely, but can be managed by conservative or surgical procedure. Most clinically dysplastic young dogs without, and even with, osteoarthritis have been reported to respond to conservative management [6] (Audrey *et al.*, 1995). The objectives of conservative therapy are to relieve pain and maintain limb function as well as to continue the dog with close to normal level of activity. Use of NSAID, chondroprotective agents, weight control and exercise restriction has been recommended for management of the patients.

Tab petjoint contains glucosamine hydrochloride, chondroitin sulphate, manganese sulphate, *Boswellia serrata*, *Withania somnifera* and Vit. C. Glucosamine stimulates the formation and repair of articular cartilage, while chondroitin sulphate prevents

other enzymes which damage the cartilage within the joint. When a dog has hip dysplasia, the joint wears abnormally and the protective cartilage on the surface of the joint gets worn away and the resultant bone-to-bone contact creates pain. Glucosamine and chondroitin help in formation of chondrocytes which are needed to synthesize new cartilage and to repair the existing damaged cartilage [1, 7] (Slatter, 2003). These are not painkillers; they work by actually healing the damage. Antioxidant like vitamin-C might be helpful in improving hip dysplasia. Tab dolocarp containing carprofen was given to relieve pain. Body weight management is important in decreasing weight-bearing stresses on joints and supporting soft tissues. Obese puppies with hip dysplasia had more degenerative joint disease than did those whose diet was restricted [6, 8] (Audrey *et al.*, 1995). Restricted exercise is also important in decreasing trauma-induced inflammation and injury in dysplastic joints. However, moderate and regulated exercise can stimulate cartilage growth and help delay joint degeneration and long controlled walks in early or mild cases of dysplasia may help prevent loss of rear muscle mass [1] (Slatter, 2003).

#### ACKNOWLEDGMENT

The authors are thankful to the Director of TVCC, College of veterinary science and Animal husbandry, OUAT, Bhubaneswar necessary funds and facilities to carry out research

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