Hip Dysplasia in Two Cats
İki Kedide Kalça displazisi

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Veteriner Cerrahi Dergisi (1997),3(2),53-55

SUMMARY
Two cases of feline hip dysplasia were encountered. The first case was a one-year-old, male Siamese cat that was presented with a history of reluctance to move and obvious atrophy of the hind legs. Clinical examination revealed painful hip joints and joint laxity. After radiological investigation, bilateral hip dysplasia was diagnosed and excision arthroplasty was carried out in each hip joint 4 months apart. Postoperatively, the patient showed gradual and progressive improvement in gait and hip pain.

The second case was an 11-month-old, cross-bred, spayed cat which had slight hip dysplasia and showed signs of painful hip joints and atrophy of femoral muscles. The cat was treated using corticosteroids and analgesics.

Keywords: Hip Dysplasia, Cat.

ÖZET


Anahtar kelimeler: Kalça displazisi, kedi.

INTRODUCTION
Hip dysplasia is a complex disease that affects man and most domestic animals. The first report of this disease in dogs were by Schnelle in 1935 and 1937. As a point of interest, hip dysplasia was first described in man by Hippocrates over 2000 years ago (12).

As the use of radiology in canine medicine increased, it was soon established that this new disease affected a high percentage of large dogs, and there was much uncertainty and controversy about the subject (8).

Hip dysplasia is a multifactorial disease in which factors have still not been agreed on to this day. These are a concentration of factors form a poll of genetic weakness, and environmental stresses that fall into a programmed pattern of progressive remodeling and degenerative joint disease. The degree of involvement varies from minute changes in the bone structure to total destruction of the hip joint. Disorganization of muscle and skeletal developments, failure of connective tissues around the hip joint, overloading of the joint, nutritional factors, biomechanical stress, breed susceptibility, etc. may be one of the causative factors (11,12).

Knowledge of feline hip dysplasia is limited and there are very few publications as case reports. Abnormalities of the coxofemoral joint and lameness in cats are similar to those seen in hip dysplasia in dogs (1,2,3,4,5,6,9,10).

Because cats spend most of their time resting and sleeping, it is usually quite difficult for cat owners to determine painful hips and related problems. Also, anatomical structures of the hip joint (logn femurs and narrow pelvis) and low body weight can be responsible for the decrement of feline hip dysplasia (3,7).

Radiological features vary greatly in severity. These are progressive degrees of shallowness of the acetabulum, subluxation of the femoral head, recontouring of the acetabular articular surface, remodeling of the femoral head and neck and secondary osteophitic proliferation on the acetabular margins and femoral neck. According to these changes and alterations in the Norberg-Olsson angle, hip dysplasia is divided into four degrees (2,7,8).

Pectinate tenectomy has been reported as effective in minor hip dysplasia, while in cases of severe hip dysplasia consideration should be given to femoral head and neck osteotomy because the results of this procedure in the cat are excellent (1,6,9).

MATERIALS AND METHODS
Case I. A one-year-old, male Siamese cat weighing 2 kg was referred to the Surgery Department of the Faculty of Veterinary Medicine of the University of Istanbul with a 4 month history of hind leg weakness, unwillingness to walk and reluctance to move.

Physical examination showed pain and discomfort upon palpation and manipulation of the hips. In addition to this, crepitation was felt on movements of legs.

The cat was referred to X-ray examination. A ventrodorsal - radiograph was taken under diazepam-ketamine anesthesia. Hip joint were evaluated radiologically by measurement of Norberg-Olsson angle. According to this, Norberg-Olsson angle was found to be 6o in the right hip joint and 7o in the left hip joint. The degree of dysplasia was evaluated as third degree bilaterally. Femoral head and neck osteotomy was performed on the
Fig. 1. Severe hip dysplasia in a 1-year old, male Siamese cat.
Şekil 1. Bir yaşlı, erkek Siyam kedisindeki 1. derecede kalça displazisi.

Fig. 2. Radiographic appearance of the same cat after unilateral excision arthroplasty.
Şekil 2. Tek taraflı ekizyon arthroplastiden sonra aynı kedinin radyografik görünümü.

Fig. 3. Ventrodorsal radiograph of the same cat after bilateral excision arthroplasty.
Şekil 3. Aynı kedinin bilateral ekizyon arthroplastiden sonra alınan ventrodorsal radyografisi.

left and right coxofemoral joints 4 months apart respectively. After 6 months the cat recovered completely and no gait abnormality was detected (Şekil 1,2,3)

Case II. An eleven-month old, spayed cross-bred cat weighing 2.5 kg was presented for hind leg lameness. Clinical examinations revealed painful hip joints and atrophy of femoral muscles.

On radiographic examination of the hip joints, first degree of hip dysplasia was determined by measurement of Norberg-Olsson angle which was °80 in the right hip joint treatment was constituted with the use of corticosteroids and analgesics orally. After 15 days the cat improved significantly (Şekil 4)

DISCUSSION

Feline hip dysplasia is seen very rarely in cats and has been reported in a retrospective study as 14 out of 270,000 feline cases (3). This is probably due to the cat’s anatomical structure and lack of environmental factors (3,4,7,9). There are only a few publications on this subject, in the form of case report (3,4,6,9,10).

Pure breeds, especially Siamese cats are reported to be carrying the highest risk for feline hip dysplasia (3,5). It is reported that females are effected more frequently (7).

In diagnosing hip joint dysplasia, radiographic evaluations used in dogs are employed. As well as radiological changes in the femoral head and acetabulum, the degree of dysplasia is determined using the Norberg-Olsson angle (1,2,3,7,10).

One of our two dysplastic cases had third degree bilateral hip dysplasia and the other had first degree bilateral hip dysplasia. Hip dysplasia, which is seen rarely in cats, is slight (first degree) in most cases (6,7,9,10).

In the severely dysplastic case a very good result was obtained by excision of the femoral head. Six months later the patient had pain-free hip joints and showed an increase in daily activity.

The slightly dysplastic case improved significantly with conservative treatment and the lameness decreased to a great extent.

These two cases are disorders which are seen very rarely, therefore publishing them would be advantageous to veterinary practice.
REFERENCES

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1992 yılında Amerika Birleşik Devletlerinde Şafkan Yarış Atlarında Kemik Travmaları

Julia H. Wilson, R.A. Robinson

Bu çalışmanın çok kapsamlı sonuçları yarış atlarındaki kemik travmalarının multifaktoriel etyolojisine işık tut- maktadır.