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Olgu Sunumu ***Case Report***

Convergent Strabismus in a Cat and It's Surgical Treatment

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Abstract
The aim of this study was to improve visual acuity and esthetic correction in a short hair domestic cat with strabismus. A domestic short hair cat (1 year old, male) referred with visual deficit and progressively obvious strabismus. For recession surgery, medial rectus muscle was detached from the sclera after used suspensory suture. The muscle insertion was recessed 4 mm and sutured to sclera. In conclusion, strabismus can be caused to visual deficy and treated succesfully by recession surgery in cats.

Introduction

Strabismus is a situation that bares with binocular vision because it interferes an animal from directing both eyes at the same time towards the same fixation point; the eyes do not fairly align with each other. Strabismus typically includes inadequacy coordination between the extraocular muscles, which bares directing the gaze of both eyes at once to the same point in space; it thus inhibits suitable binocular vision (Bernays and Smith, 1999). There are cats (especially in the Siamese) congenital squint due to abnormal development of visual pathways between the retina and geniculate body (Kaas and Guillery, 1973).

Strabismus can be evident or confidential. Heterotropia, or an evident deviation, is exists while the animal views a target binocularly, with no occlusion of either eye. The patient is unable to align the gaze of each eye to achieve fusion (Bernays and Smith, 1999). A latent deviation, or heterophoria, is only exists after binocular vision has been impeded, characteristically by closure one eye. This type of animal can typically protect fusion despite the linage that arises when the establishing system is loosed. Intermittent strabismus is a combination of both of these types, where the animal can succeed fusion, but sometime or often shakes to the point of an evident deviation (Martin, 2009).

As with other binocular vision problems, the primary aim of therapy for those with strabismus is rest, single, pure, normal binocular vision at all spaces and ways of view (Eskridge, 1993). Treatment should be began as haste as possible to obtain the progress of the best possible visual improve (Martin, 2009). The aim of this study was to improve visual acuity and esthetic correction in a short hair domestic cat with strabismus.

Case

A domestic short hair 1-year-old cat (male) referred with visual deficit and progressively obvious strabismus (Figure 1). The owner had watched that at times, additionally, the cat would run in a round shape to get from one point to another. It had also been watched inclined its head in one way whilst looking at a substance in the reverse way. We were demanded to inspection the cat's eyes to determine if there were any manifest disorders that might show its sight and attitude. The patient had not been any treated for strabismus.

The eyes of cat were examined using indirect ophthalmoscopy (Welch Allyn, USA). Intraocular pressure was defined using a Tonovet (RBT, Icare VET, Finland). A goniolens was used to examine iridocorneal angles. Iridocorneal angles were opened. Intraocular pressure was in normal values (17 mmHg). Clinical diagnosis was esotropia in left eye.

Figure 1. Noted the convergent strabismus in left eye in case

Cat was anaesthetized with an intramuscular injection of xylazine 2% (Rompun, Bayer, Germany) and ketamine 10% (Alfamin, Ege Vet, Turkey), (2 and 10 mg/kg, respectively). Topical anaesthesia was established by instilling proparacaine 0.05% (Alcain, Alcon, USA) in the left eye 5 minutes prior to conjunctival incision. Canthotomy was done. For recession surgery, medial rectus muscle was detached from the sclera (Figure 2) after used suspensory suture with Vicryl 7-0 (polyglactin 910, Ethicon, USA). The muscle insertion was recessed 4 mm and sutured to sclera (Figure 3). Promptly after surgery, neomycine-dexamethazone combination (Neo-kort, Vetaş, Turkey) was applied to conjunctival cul-de-sac. Recession procedure was uneventful and neither discomfort nor inflammation was observed in cats during the 30 days of post-operative follow-up (Figure 4). Animal owner was reported correction of vision in cat.

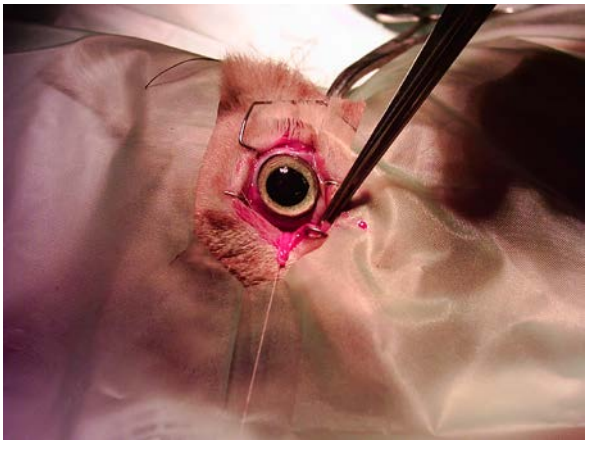

Figure 2. View of medial rectus muscle detaching from the sclera

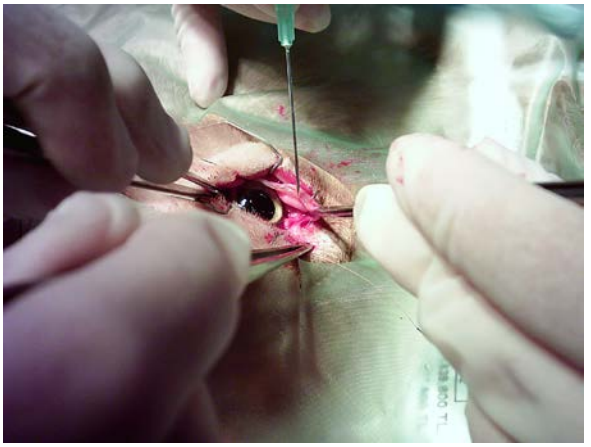

Figure 3. View of medial rectus muscle recessed and sutured to sclera

Figure 4. Symetric view of eyes in postoperative period

Discussion

Strabismus may grading on the strength of acquired, either congenital, time of onset, or secondary to another pathological problem. Many new-borns are born with their eyes mildly misaligned, and this is especially outgrown by six to 12 months of age. Secondary and acquired strabismus occur after (Wright and Spiegel, 2003; Martin, 2009). This case was 1-year-old. It can be congenitally strabismus but visual deficy was developed slowly and then understood by owner.

Congenital fibrosis of extraocular muscle can cause to strabismus (Wei et al, 2005). Fibrosis was not determined on extraocular muscle during surgery. The extraocular muscles administer the location of the eyes. Thus, a disease with the muscles or the nerves controlling them can arise paralytic strabismus. Paretic strabismus can be either concomitant or incomitant. Most types of new-borns and childhood strabismus are concomitant (Şenerkek et al, 1996). Concomitant strabismus was detected in this case. This finding is

parallel with information in others. It may be paretic strabismus.

Strabismus surgery embarks to align the eyes by replacementing, lengthening, or shortening, the location of one or more of the extraocular eye muscles. The transaction can be applied in about an hour and needs about one or two weeks for healing (Martin, 2009). Recession surgery was performed in this case. For this technique, the muscle insertion was recessed 4 mm and sutured to sclera.

Double vision can seldom outcome, particularly instantly later the operation, and vision loss is uncommon (Motley and Asbury, 2011). Visual function of the cat was good and macroscopic anomaly of the eye was not determined.

In conclusion, strabismus can be caused to visual deficiency and treated successfully by recession surgery in cats. It is determined that this technique have some advantages such as visibility to extraocular muscle in all stage in operation, adhesive syndrome complication and other complications is seen more less in this technique, and more less invasive technique.

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