Case report

Short-term results of Ahmed glaucoma valve implantation in the surgical treatment of angle-recession glaucoma in dog

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Abstract

Angle-recession glaucoma, being a consequence of blunt injury of an eyeball, is likely to develop in both a short or very distant period. The likelihood of the incidence of that condition in the clinical form is determined by the extent of injuries of ciliary cleft structures, especially of a trabecular meshwork. The manuscript reports a case of an early glaucoma secondary to a blunt injury of an eyeball with symptoms of angle recession to 300° of periphery and intraocular pressure (IOP) at a level of 62 mmHg. The basic diagnostic examination that enables the evaluation of an angle, iris root and an opening to the ciliary cleft is gonioscopy. In case of a lack of response to the pharmacological reduction of IOP, a method of choice still remains a surgical procedure. In the reported case, a drainage procedure was applied in the form of implantation of the Ahmed valve prosthesis. Control tonometric examinations of the operated eye, performed over a 20-week period of postoperative management, demonstrated IOP at a level of 19 mmHg.

Key words: Ahmed valve, gonioimplant, angle recession, glaucoma, dog

Introduction

Angle-recession glaucoma is classified as a type of traumatic, secondary open-angle glaucoma. The clinical form of glaucoma may appear from several days or weeks to a few years after eyeball injury (Mermoud et al. 1993, Taub and Gardner 2004). Gonioscopy is the principal examination that enables evaluating the structure of ciliary cleft (Martin 1969, Bedford 1977, Bedford 1985, Gelatt and Gelatt 2001, Peiffer and Petersen-Jons 2001, Taub and Gardner 2004). In the correct picture, a wide strongly pigmented belt of pectinate ligament is visible between iris root and a brighter cornea. In the case of the traumatic open-angle glaucoma, a belt of ciliary body may be observed anterior of the iris root.

In veterinary patients, glaucoma is mostly diagnosed in advanced state when aggressive clinical signs of the disease such as pain of the eyes caused by extremely high intraocular pressure (IOP) are present (Grozdanic et al. 2007). There is no successful method of glaucoma treatment which is polithiological disease and serious clinical problem (Bentley et al. 1999, Gelatt 2000, Peiffer Jr and Petersen-Jones 2001). The pres-