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Management of Third Eyelid Gland Prolapse ('Cherry Eye') in a Pembroke Welsh Corgi: A Case Report

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Abstract

Cherry eye or third eyelid gland prolapse is a common ophthalmic disorder in dogs, particularly in brachycephalic breeds such as the Pembroke Welsh Corgi, and is caused by weakening of the connective tissue that anchors the gland. This condition causes discomfort and irritation and may lead to keratoconjunctivitis sicca if not properly treated. This case report aimed to describe the preoperative preparation, surgical procedure, and postoperative management of third eyelid gland prolapse in a Pembroke Welsh Corgi. The diagnosis was based on clinical examination and hematological evaluation, which revealed a normal systemic condition suitable for surgery. Surgical correction was performed using the Morgan's Pocket Technique under general anesthesia, with butorphanol as premedication and propofol as the induction agent, followed by isoflurane for anesthetic maintenance. Postoperative treatment consisted of oral meloxicam and topical gentamicin ophthalmic ointment to reduce inflammation and prevent infection. The procedure resulted in successful repositioning of the gland without recurrence or complications. The surgical wound healed properly, and normal tear production was maintained. This report demonstrates that the Morgan's Pocket Technique is an effective and safe method for correcting cherry eye in dogs, providing a high success rate with minimal recurrence while preserving the physiological function of the gland.

Keywords**:** *Cherry eye; Third eyelid gland prolapse; Morgan's pocket technique; Pembroke Welsh Corgi; Dog*

INTRODUCTION

Ophthalmic disorders are among the most common health problems in companion animals, particularly dogs. If left untreated, these conditions can cause pain, visual impairment, and even loss of the eyeball (Sebbag *et al*., 2023). One of the most frequently reported ophthalmic disorders is prolapse of the third eyelid gland, also known as cherry eye. This condition is characterized by the protrusion of the nictitating membrane gland through the medial corner of the eye, appearing as a red mass, often accompanied by inflammation and mucous discharge (Devira *et al*., 2025).

A study involving 368 dogs identified 24 cases (6.65%) with a history of cherry eye, with affected dogs ranging in age from under 6 months to over 3 years. The highest prevalence was observed in Shih Tzus, followed by Beagles, Labradors, French Bulldogs, Lhasa Apsos, mixed-breed dogs, and unidentified breeds (Balasaraswathi *et al*., 2024).

The third eyelid gland plays a critical role in tear production, contributing approximately 30–40% of the total tear film. Improper management, such as gland excision, can lead to complications including keratoconjunctivitis

sicca (KCS) or chronic dry eye, causing pain and physiological disturbances on the corneal surface. Therefore, prompt and appropriate treatment is required to restore the anatomical position of the gland and maintain its physiological function (Hussein *et al*., 2022).

Various surgical techniques have been developed to correct cherry eye, including excision, anchoring (posterior anchoring and anterior nictitating), and pocketing (mucosal pouching). Among these methods, Morgan's Pocket technique is recognized as the most effective due to its high success rate, low recurrence risk, and its ability to preserve the physiological function of the lacrimal gland (White and Brennan, 2018).

Therefore, this case report aims to describe the clinical findings, surgical management using the Morgan's Pocket technique, and postoperative outcomes in a Pembroke Welsh Corgi dog.

MATERIALS AND METHODS

Case History

This case report describes a four-year-old female Pembroke Welsh Corgi named Beanna, weighing 9 kg, who was brought to Petology Veterinary Center, South Jakarta. The owner reported a prominent red mass in the medial chantus of the right eye, accompanied by excessive tearing (epiphora), which had been present for approximately one week. The dog had received complete vaccinations and deworming according to schedule. The condition of the dog's eye is shown in Figure 1.

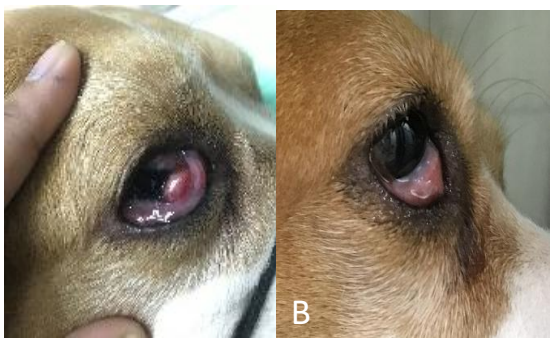

Figure 1. Surgical treatment of third eyelid gland prolapse using Morgan's Pocket technique in a Pembroke Welsh Corgi dog. (A) Before surgery and (B) 3 days after surgery.

Diagnostic evaluations were conducted at Petology Veterinary Center, including general physical examinations such as measurement of body temperature, heart rate, respiratory rate, capillary refill time (CRT), and assessment of hydration status. Hematological analyses were performed using an automated hematology analyzer to determine red blood cell (RBC) count, hemoglobin (HGB), hematocrit (HCT), platelet (PLT) count, white blood cell (WBC) count, and WBC differential.

Surgical correction of cherry eye (third eyelid gland prolapse) was performed using Morgan's Pocket technique, which is recognized as effective in restoring the anatomical position of the gland and preventing recurrence (Balasaraswathi *et al*., 2024). The periocular area was cleaned with 10% povidone-iodine solution and draped with a sterile surgical cloth. Premedication was administered using butorphanol (0.01 mL/kg IV) as an analgesic and sedative. Anesthesia was induced with propofol (1 mg/kg IV) and maintained with 3–5% isoflurane via an endotracheal tube. The dog was positioned in lateral recumbency with the prolapsed eye facing upward.

The prolapsed gland was exposed using Adson-DeBakey forceps, and two parallel incisions were made in the bulbar conjunctiva on the cranial and caudal sides of the gland. The mucosa between the incisions was bluntly

dissected to form a pocket. The incision edges were sutured using a simple continuous pattern with 5-0 absorbable polyglactin 910 (Vicryl®), repositioning the gland under the conjunctival mucosa. The surgical area was subsequently rinsed with sterile physiological saline (0.9% NaCl) to remove any remaining tissue or debris.

Postoperative therapy included meloxicam (0.2 mg/kg BW, Metacam®), administered orally once daily for 4 days, as a nonsteroidal anti-inflammatory drug, and Gentamicin ophthalmic ointment 0.3% (Cendo Gentamicin®) was applied topically twice daily to prevent secondary infection.

RESULT

Physical examination revealed a round, reddish protrusion resembling a cherry in the medial canthus of the right eye. Serous ocular discharge was observed. The dog appeared active and responsive, with a good appetite. Physiological parameters such as body temperature, heart rate, respiratory rate, and capillary refill time (CRT) were within normal ranges.The results of the physical examination of the case dog are shown in Table 1.

Table 1. Physical Examination

Type of Examination	Result	Description
Temperature	39^{0}C	Normal
CRT	< 2 s	Normal
Respiratory Rate (RR)	60 x / minute	Normal
Heart Rate (HR)	152 beats per minute	Normal
Eye (right)	- There is a round, reddish protrusion like a cherry on the medial canthus - Ocular discharge	Abnormal

The results of the hematological examination are shown in Table 2. The hematological examination was performed to assess the dog's health status prior to the surgical procedure.

Table 2. Hematology test results

Test	Result	Unit	Reference Interval
RBC	8.28	M/µl	5.65-8.87
HCT	54.1	%	37.3-61.7
HGB	17.8	g/dL	13.1-20.5
MCV	65.3	Fl	61.6-73.5
MCH	21.5	Pg	21.2–25.9
MCHC	32.9	g/dL	32.0-37.9
RDW	18.9	%	13.6-21.7
%RETIC	0.5	%	
RETIC	37.3	K/µl	10.0-110.0
RETIC-HGB	21.3	Pg	22.3–29.6
WBC	10.99	K/µl	5.05-16.76
%NEU	64.1	%	
%LYM	28.6	%	
%MONO	4.7	%	
%EOS	2.5	%	
%BASO	0.1	%	
NEU	7.05	K/µl	2.95-11.64
LYM	3.14	K/µl	1.05-5.10
MONO	0.52	K/µl	0.16-1.12
EOS	0.27	K/µl	0.06–1.23
BASO	0.01	K/µl	0.00-0.10
PLT	265	K/µl	148-484
MPV	11.4	K/µl	8.7-13.2
PDW	12.6	Fl	9.1–19.4
PCT	0.30	%	0.14-0.46

Based on the medical history, physical examination, and supporting tests, Beanna the dog was diagnosed with third eyelid gland prolapse or Cherry eye with a favorable prognosis.

The surgical procedure was performed using Morgan's Pocket technique under general anesthesia (butorphanol–propofol–isoflurane). The procedure was completed successfully without intraoperative complications. Repositioning of the gland was performed using simple continuous sutures with 5-0 absorbable Vicryl® thread.

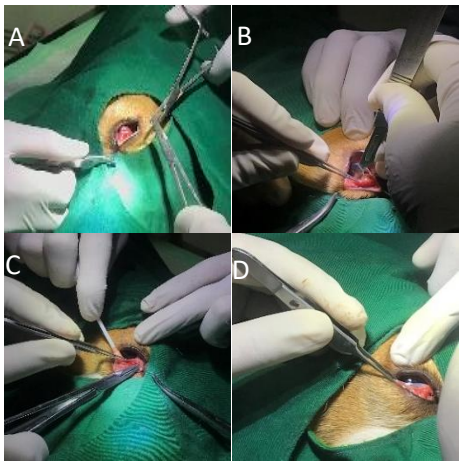

Figure 2. Figure 2. Repositioning procedure for the cherry-eye condition. (A) Placement of a stay suture using 5-0 absorbable polyglactin 910 (Vicryl®), (B) creation of incisions on the medial and lateral aspects of the nictitating membrane gland, (C) compression of the gland followed by continuous suturing, and (D) final appearance after the suturing process.

Postoperative evaluation showed revealed that the patient was stable, with a normal appetite and no signs of excessive pain. The surgical wound was clean, dry and showed no signs of edema, exudate, or prolapse. Follow-up examinations were conducted on days 3, 7, and 14 post-surgery. On day 3, mild glandular swelling was observed and the eye remained watery and partially closed, however the dog's appetite and activity had begun to improve. By day 7, the swelling had decreased, the eye was fully open, and no ocular discharge was observed. By day 14, the eye had completely recovered, the dog's activity and appetite were normal, and no recurrence or complications were detected. These findings indicate successful repositioning of the nictitating membrane gland and complete recovery of the patient.

DISCUSSION

The cherry The case of cherry eye in a Pembroke Welsh Corgi dog in this report was successfully treated using the Morgan's pocket technique, resulting in excellent clinical outcomes. This technique is well recognized for preserving the physiological function of the lacrimal gland and reducing the risk of recurrence (Hussein *et al*., 2022).

Preoperative hematological examination revealed that all major parameters, including RBC, HGB, HCT, and PLT, were within normal reference ranges. These findings indicate that the patient was in good physiological condition to safely undergo anesthesia and surgery. The slightly decreased reticulocyte hemoglobin (RET-He) value did not indicate clinical anemia. This stable hematological status plays an important role in supporting optimal wound healing and minimizing the risk of anesthetic and postoperative complications (Costa *et al*., 2015).

Pathophysiologically, prolapse of the third eyelid gland occurs due to weakness of the supporting connective tissue or chronic inflammation, which allows the gland to easily displace from its normal anatomical position. This condition is commonly observed in breeds with a genetic predisposition, such as Beagles, Bulldogs, Cocker Spaniels, and Welsh Corgis (Yaygingul *et al*., 2020). If left untreated, cherry eye may lead to corneal irritation, persistent inflammation, and decreased tear production, which can ultimately result in keratoconjunctivitis sicca (KCS) (White and Brennan, 2018).

The selection of Morgan's pocket technique in this case was based on its ability to preserve the third eyelid gland while maintaining its normal excretory function. This technique involves creating two parallel incisions on the bulbar conjunctiva to form a conjunctival pocket for repositioning the prolapsed gland back to its anatomical location. The main advantages of this method include preservation of tear production, minimal corneal irritation, and a high success rate with a low incidence of recurrence. Deveci *et al*. (2020) reported a success rate of 94.12% with minimal complications, while Yaygingul *et al*. (2020) demonstrated stable long-term outcomes across various dog breeds.

In contrast, gland excision techniques are associated with permanent reduction in tear secretion and a higher risk of developing keratoconjunctivitis sicca (KCS). Additionally, anterior and posterior fixation techniques may induce corneal irritation due to suture contact and may restrict the normal mobility of the nictitating membrane (Hussein *et al*., 2022; White and Brennan, 2018). Therefore, the

application of Morgan's pocket technique in this case was an appropriate and physiologically safe surgical choice.

The anesthesia protocol used in this case, consisting of premedication with butorphanol, induction with propofol, and maintenance with isoflurane, provided stable and adequate anesthesia throughout the surgical procedure. Butorphanol acts as a κ-opioid receptor agonist that provides mild analgesic and sedative effects, while propofol has a rapid onset of action and short recovery time, making it ideal for ophthalmic surgery (Novakovski *et al*., 2020; Papich, 2020).

Postoperative therapy with meloxicam (Metacam®) as a nonsteroidal anti-inflammatory drug was effective in suppressing pain and inflammation, as evidenced by the patient remaining active, maintaining a normal appetite, and showing no signs of excessive pain after surgery. The use of Gentamicin ophthalmic ointment 0.3% (Cendo Gentamicin®) was also effective in preventing secondary infection, as indicated by the absence of exudate, edema, or local signs of infection during the monitoring period Prinsip-prinsip asepsis dan sterilisasi juga diterapkan secara ketat untuk meminimalkan risiko infeksi pascaoperasi (Fossum *et al*., 2018).

Postoperative evaluations were conducted on days 3, 7, and 14. On day 3, mild swelling of the gland was still observed and the eye had not fully opened; however, the patient's activity and appetite had begun to improve. By day 7, the swelling had decreased significantly, the eye opened normally, and no ocular discharge was observed. On day 14, the eye had completely recovered, with normal activity and appetite, and no complications or recurrence were detected. These findings indicate that Morgan's pocket technique provided optimal healing within two weeks, which is consistent with the report by Sowmya *et al*. (2024) stating that permanent anatomical improvement generally occurs within 2–3 weeks postoperatively.

Although the outcome of this case was excellent, several limitations should be acknowledged. First, the follow-up period was relatively short, limited to 14 days postoperatively, and therefore does not allow evaluation of long-term recurrence. Second, this report involved only a single case, so the findings cannot be generalized to all breeds or clinical presentations of cherry eye. Further studies involving larger sample sizes and longer observation periods are needed to strengthen the clinical evidence regarding the effectiveness of the Morgan's pocket technique.

CONCLUSION

The The case of cherry eye in a Pembroke Welsh Corgi dog was successfully managed using Morgan's pocket technique, which effectively restored the gland to its anatomical position without complications while preserving its physiological function. No signs of recurrence were observed up to 14 days postoperatively. The success of this procedure was supported b appropriate preoperative preparation, strict adherence to aseptic surgical principles, and proper postoperative management. Nevertheless, long-term follow-up is still required to evaluate the potential risk of recurrence in the future.

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