Eyelids & Adnexa Diseases & Surgery

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The Rule of Eyelid Surgery

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The Rule of Eyelid Surgery

- KEEP
- IT
- SIMPLE
- STUPID
Ophthalmic Surgery

- Gelatt KN: Veterinary Ophthalmic Surgery 2011

Everyone has an opinion

Ophthalmic Surgery

Pitfalls
- Failure to use magnification
- Failure to use appropriate instrumentation
- Inappropriate suture selection and/or placement
- Poor tissue handling

Chalazion clamp
Jaeger eyelid plate
Magnification

The Eyelids serve the Cornea

Size Does Matter
All entropion/ectropion patients have abnormalities of eyelid length.
Permanent Lateral Canthoplasty

Lateral Canthal Entropion

Macrobelepharon, collapsing lateral canthus, entropion
Permanent Lateral Canthoplasty

Entropion

6/21/14
Where is 2mm??

Modified Hotz-Celsius
Modified Hotz-Celsius

Lateral canthoplasty and Modified Celsus

2 yr old Great Dane

Pre-op
- Macroblepharon
- Entropion
- Retropion
- Scroll cartilage
Permanent Lateral Canthoplasty

28 mm

Modified Hotz-Celsius

2 yr old Great Dane
Immediately Post-op
A combined HC and lateral canthal closure had a 99.21% success rate of resolving lower lid entropion.
Why did this surgery fail?

Failed to correct macroblepharon
Failed to correct collapsed canthus
Incision too far from eyelid margin

Follow the rules…it works

What options are there for this dog?
Stades Technique

From: Projects by Dittmann J: http://www.delta-3.de/

Medial Canthal Entropion

What is the #1 Question?

[Images of canine eyes and a pug's face]
Permanent Medial Canthoplasty
Permanent Medial Canthoplasty
The primary problem remains macroblepharon.

Agenesis
- lack of development of the upper eyelid
- superior-temporal 50% of the eyelid
- usually bilateral
What is wrong with this image?

What the books tell you to do

Dziezyc/Millichamp modification

Bridge incision
Conjunctiva to oral mucosa
5-0 vicryl simple continuous
Parotid Duct
Parotid Duct
Distichia

- Treatment:
  - Epilating the hairs has only a short term effect
  - Cryosurgery
  - Electroepilation
  - CO2 Laser
Cryosurgery

Nitrous Oxide -89°C

Liquid nitrogen -196°C

Distichia
Ectopic cilia

- originates from tarsal/meibomian gland
- exits from palpebral conjunctiva
- difficult to diagnose (need magnification)
- Usually at the 12 o’clock position
- Common in Shih Tzu
Ectopic cilia

Eyelid Neoplasia

Canine Eyelid Neoplasia
- Common
- Benign (>90%)

COPLOW - Comparative Ocular Pathology Laboratory of Wisconsin
Canine Eyelid Neoplasia

- Basal Cell
- Melanoma

Feline Eyelid Neoplasia

- more aggressive than neoplasms of the canine eyelid
Results: All periocular CMCTs were restricted to the eyelids. In addition to surgical excision, three cats were treated with adjunctive therapy (strontium-90 irradiation or cryotherapy) intraoperatively. Local tumor control was achieved in 22/23 cats with a minimum follow-up of 30 days (median follow-up time of 711 days); one cat developed disseminated CMCTs but no local recurrence. Cats with periocular CMCTs had a median survival time of 945 days. Metastatic disease involving peripheral lymph nodes or abdominal viscera was not detected in any cat at any time during the study. All periocular CMCTs were classified as low-grade based on histopathology, and complete excision was achieved in approximately 50% of cases.

Conclusions: Surgical excision of periocular CMCTs in cats is an effective treatment option with rare local recurrence and metastases, even following incomplete surgical excision.
Eyelid Neoplasia

- Treatment:
  - Dog vs. Cat
  - Benign neglect
  - Surgery
    - Excisional biopsy
    - Cryosurgery
    - CO2 laser
    - Chemotherapy
    - Radiation

How much can I remove?
Wedge Resection

Two-layer closure
- Conjunctiva: 6-0 absorbable suture in a continuous pattern
Two-layer closure

- Skin: 6-0 non-absorbable suture
- Cruciate suture pattern at the eyelid margin, then simple interrupted
- Reconstruction of larger eyelid mass excisions
- H-plasty/Z-plasty
- Semicircular flap
- Split eyelid flap
- Cross eyelid flap
- Rhomboid graft flap
- Lip to Lid
- Axial pattern flap
- H-Plasty
- Repair of larger excisions
- Preserve as much conjunctiva as possible
- Diverging incisions

b = 120% a

From: Projects by Dittmann J: http://www.delta-3.de/

Excised

Diverging incisions

Preserve Conjunctiva
Axial Pattern Flap

One step procedure for medial canthal reconstruction

Axial Pattern Flaps incorporate a cutaneous artery and vein vs a subdermal plexus flap

Intralesional Chemotherapy

Conjunctival Neoplasm

Radiation
Conjunctival Neoplasm
Squamous papilloma

Conjunctival Neoplasm
Hemangioma
Hemangiosarcoma

Conjunctival Melanoma
Conjunctival Melanoma
- 5% mortality
Canine amelanotic melanoma

Feline conjunctival melanoma

Conjunctival Melanoma - 55% mortality

Feline conjunctival melanoma

Feline conjunctival melanoma
Third Eyelid Neoplasia

- Papilloma
- K9 adenocarcinoma

Options:
- Surgically replace
- Leave alone
- Excise
- All are at risk for KCS
- Excise > Leave alone > Replace
- Monitor STT for life

“Cherry” Eye
Power set to lowest coagulation energy setting and gradually increased to effect. Typically a setting of 
Cut 0 and Coag 2.

Albaugh RA, Stuhr CM: Thermal cautery of the canine third eyelid for treatment of cartilage 