



## Case Study: Discharge from the conjunctiva of the right eye

Yo-Yo, a 2 year-old neutered male Golden Retriever was presented for evaluation of thick discharge from the conjunctiva of his right eye. Yo-Yo had been injured several months earlier when a stick penetrated the conjunctival lining of his right eye. The stick was removed and no injury to the eye or associated structures was seen.

Over the following few weeks, a thick, off-white discharge developed from the right eye. The discharge resolved with antibiotic treatment. However, after antibiotics were discontinued, the discharge returned.

Yo-Yo was otherwise healthy and on his physical examination, the only abnormality noted was the slight discharge and redness of the lining around his eye (conjunctiva). Lab tests were performed to evaluate Yo-Yo's health status and the only abnormality was a mild elevation of his neutrophil count – an immune system cell involved in fighting infections. An ultrasound examination of his eye was performed and the structures of the eyeball appeared normal.

Yo-Yo was then anesthetized for a CT scan of his orbital region. When Yo-Yo was anesthetized, digital pressure applied to the region behind his eye from within his oral cavity resulted in expression of moderate amounts of thick, white fluid from the region around his right eye. The CT scan showed a dark region behind his right eye with two bright central lines. A persistent foreign body was suspected in the region behind his right eye. Surgery was performed to explore the region behind his right eye.

Access to the area was obtained by cutting and moving a region of the facial portion of the skull called the zygomatic arch. Once the bone was cut and reflected downward, exploration of the retrobulbar region resulted in retrieval of two small linear pieces of wood 2 and 2.5 cm in length. The bone flap was repaired with orthopedic wires and his skin closed with suture.

Yo-Yo recovered well following the surgery. His surgery site healed without incident and he has had no further discharge from the right eye.

In Yo-Yo's case, the original stick injury penetrated the tissues immediately adjacent to the right eye. Fortunately the eyeball itself was not injured. Two small pieces of wood broke off of the tip of the stick prior to removal at the time of the initial injury. The small pieces of wood then acted as irritants and were able to provide a safe place for bacteria to reside during antibiotic treatment. When antibiotics were administered, the infection around the wood pieces was controlled and the discharge from the eye would resolve. However, as soon as antibiotics were stopped, the bacteria that remained in the wood pieces would begin to multiply again and re-establish infection in the area behind the eye and the discharge would start again.

Removal of the objects eliminated the irritation and removed the safe haven for organisms allowing Yo-Yo's body to heal and clean up the injured tissue. Although Yo-Yo's treatment was very involved, he was fortunate to have no injury to his eye and a complete recovery from his problem with no long-lasting effects – aside from a cautious attitude around sticks!