

U.G. (4th Year B.V.Sc. & A.H.) Class

EXAMINATION OF EYE AND EAR

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EXAMINATION OF EYE

The eyes must always be examined with great care.

EYE DISCHARGE:

Any discharge from the eyes should be noted:

watery- in obstruction of the lacrimal duct,
serous- in the early stages of inflammation,
purulent- in the later stages of inflammation.

Whether the discharge is unilateral or bilateral is of considerable importance:

Unilateral- in local inflammation
Bilateral- in systemic infection

EYE MOVEMENTS:

Repeated and spontaneous lateral movements of the eye (nystagmus) may be seen in some **neurological** conditions.

If the head is tilted upwards the eyes move downwards within the orbit, a movement involving the vestibular system and known as ***vestibular eye drop***.

Movement may be excessive in painful eye conditions or in cases of nervous irritability including hypomagnesemia, lead poisoning, and encephalitis.

SIZE OF EYEBALL:

Eyeball size does not usually vary, but protrusion is relatively common and when unilateral is caused by pressure from behind the orbit in most cases. Periorbital lymphoma in cattle, dislocation of the mandible, and periorbital hemorrhage are common causes.

Retraction of the eyeballs is a common manifestation of reduction in volume of periorbital tissues (Shunken eye), e.g., in starvation when there is disappearance of fat and in dehydration when there is loss of fluids.

EXAMINATION OF OCULAR REFLEXES:

Fixation, palpebral, corneal, menace and light response reflexes are checked on both sides.

Inequality of pupil size may indicate general or specific neurological damage if there is no sign of glaucoma or intraocular infection.

CLOSE EXAMINATION OF THE EYE:

Visual access to the eye is often aided by tilting the head slightly downwards on the side which is being examined. This will cause the animal to rotate the eyeball upwards with wide open eyelids allowing both direct visual access and facilitate the use of the ophthalmoscope.

Ocular injury, infection and foreign bodies are quite common in cattle.

EXAMINATION OF CONJUNCTIVA AND SCLERA:

This examination is important because it is a good indicator of the state of the peripheral vascular system.

The sclera is occasionally damaged by injury. Its vascularity is also increased in some cases of meningitis.

Petechial haemorrhages in the conjunctive/sclera may be seen in cases of septicaemia and yellow discolouration may be present in jaundice.

Pallor- Anemia

Dry – in acute pain and high fever

EXAMINATION OF CORNEA:

Corneal lesions in cattle are common, being chiefly the result of either pink eye (infectious keratocconjunctivitis) or injury.

Corneal abnormalities include opacity, varying from the faint cloudiness of early keratitis to the solid white of advanced keratitis, often with associated vascularization, ulceration, and scarring.

Increased **convexity** of the cornea is usually caused by increased pressure within the eyeball and may be caused by glaucoma or hypopyon (pus and inflammatory cells in the anterior chamber).

INTERNAL/ DEEP STRUCTURES EXAMINATION OF EYE:

These are inspected first visually and then through an ophthalmoscope.

The *anterior chamber of the eye* should be carefully examined. *Hypopyon* – pus and debris in the anterior chamber – is seen occasionally in calves accompanying or following **septicaemia**.

Infection gaining access to the anterior chamber may result in *damage to and inflammation (iritis) of the iris* as seen in some cases of 'silage eye' caused by listeria or chlamydia.

In *anterior synechia* the inflamed iris may become adherent to the posterior surface of the cornea.

In *posterior synechia* the iris is adherent to the anterior surface of the lens.

Cataract formation is seen in some cases of intrauterine infection with bovine virus diarrhoea in cattle and in diabetes in dogs.

Abnormal dilation of the pupil (mydriasis) is usually accompanied by absence of the pupillary light reflex.

If the animal is **blind** there may be a problem in the retina or the optic nerve.

Optic nerve damage is seen as papilloedema in some cases of vitamin A deficiency.

Abnormal constriction of the pupil (miosis) may be seen in cases of organophosphorus poisoning and polioencephalomalacia.

VISION TESTS:

Several tests of vision and of ocular reflexes are easily performed

Tests for blindness include the **menace reflex** and an **obstacle test**.

Menace Reflex: blow at the eye is simulated with care being taken not to cause an air current. The objective is to elicit the eye preservation reflex manifested by reflex closure of the eyelids. This does not occur in peripheral or central blindness, and in facial nerve paralysis.

Obstacle test: the animal's ability to avoid obstacles assessed. It can be used for night blindness.

Pupillary light reflex- closure and dilatation of the iris in response to lightness and darkness—is best tested with a strong flashlight.

Total blindness is called ***amaurosis***, and partial blindness is called ***amblyopia***.

EXAMINATION OF EAR

The ears are normally held horizontally to the head and *drooping* is abnormal.

Animals in poor health may show bilateral drooping of the ears.

Unilateral ear drooping may indicate infection of the ear itself, for example caused by an infected ear tag, or compromise of the 7th cranial (facial) nerve supply, for example in listeriosis.

Ear tremor has been seen in some cases of bovine spongiform encephalopathy (BSE).

Increased muscle tone with stiffness of the ears is seen in tetanus.

If aural discharge is present, the ear canal can be inspected using an auriscope or a small fibreoptic endoscope.

Deafness may be caused by damage to the auditory part of the 8th cranial (vestibulocochlear) nerve.

Aural haematomata are extremely rare in Cattle but very common in dogs.

THANK YOU

Coronavirus: How to stay safe



Wash your
hands
regularly



Sneeze/
cough into
a tissue



Bin it!
Throw your
tissues away
immediately



Sneeze/
cough inside
your elbow