

# VITREOUS

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- The vitreous is a transparency elastic hydrogel structure
- The vitreous is divided into zones:
  1. anterior vitreous
  2. posterior vitreous
  3. cortex
  4. central vitreous
- The vitreous is composed of
  - water (99%)
  - collagens
  - hyalocytes
  - hyaluronic acid
- The vitreous contributes to maintaining ocular volume and shape of the globe

## Vitreous Pathologic Reactions

- Liquefaction

The vitreous may liquefy in response to infections, traumas, uveitis or senile changes. It separates from the retina. Liquefaction vitreous may enter the subretinal space.

- Cicatrization

Scar tissue may form in the vitreous. These tissues may detach the retina

- Proliferative vitreoretinopathy

- Vascularization

- Inflammation

- Elongation

## **Persistent Hyaloid Artery**

Congenital and developmental abnormalities

The remnants of the artery origins on the surface of optic disc

Persistent hyaloid artery must be differentiated from these conditions:

1. Posterior capsular and subcapsular cataracts
2. Normal lens sutures
3. Vitreous bands
4. Persistent tunica vasculosa lentis

## **Vitreous Degeneration**

The separation of the fluid and solid constituents of the vitreous into segregate fractions

Occur naturally in elderly patients

Commonly demonstrated by ultrasonography

## **Vitreous Hemorrhage**

Uncommon

The source of the blood may be leakage from retinal or uveal blood vessels

Conservative treatment consists of antiinflammatory and mydriatic drugs

If membranes and bands are seen, an intraocular injection of tissue plasminogen activator (TPA) may be advocated. TPA breaks down fibrin traction bands and thereby prevent vitreoretinal detachment.

## **Asteroid Hyalosis**

Characterized by the appearance of numerous, small, refractile bodies scattered through the vitreous

Vision is not affected

May occur spontaneously in older animals

In association with chronic inflammatory

In asteroid hyalosis the particles consist of calcium and phospholipids complexes

## **Vitreous Mass**

The differential diagnosis includes

- Intraocular neoplasm
- Hemorrhage
- Foreign body
- Retinal detachment
- Lens luxation
- Vitreous abscess
- Parasites
- Cyst
- Persistent hyaloid artery
- Fibrous tissue
- Endophthalmitis

## **Hyalocentesis**

The removal of a small amount of liquefied vitreous for cytologic or microbiologic analysis. It is performed for the diagnosis of serious intraocular disorders. It carries the risk of intraocular hemorrhage.

## **Vitrectomy**

The removal of a portion of the vitreous body. Indications:

- Severe intraocular infection
- Surgical reattachment of retina
- Glaucoma prophylaxis