

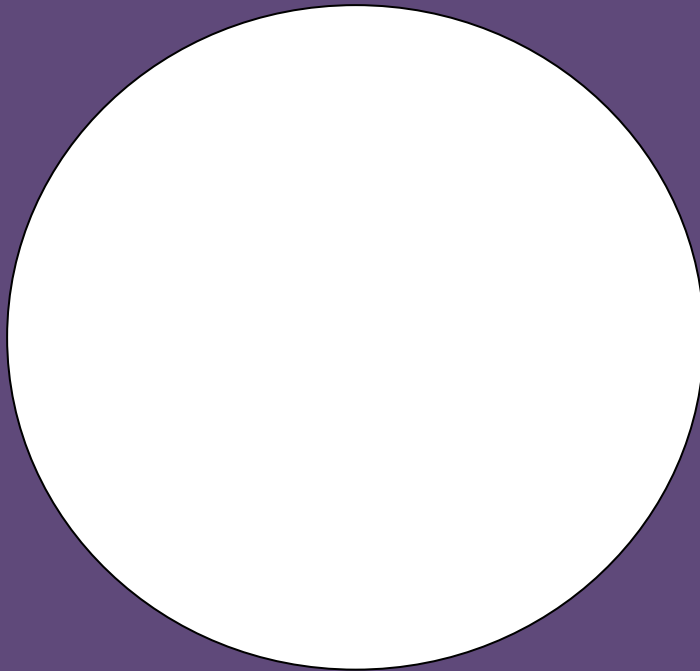
**Organ:** brain (Cerebellum)

**Stain:** H&E

**Lesion:** encephalitis (Avian encephalomyelitis )

**Microscopic findings :**

- 1- Some neurons are hypereosinophilic, shrunken, angular with pyknotic or faded nuclei (degeneration and necrosis).
- 2- Perivascular spaces (Virchow-Robin space ) are expanded by lymphocytes, macrophages and plasma cells.



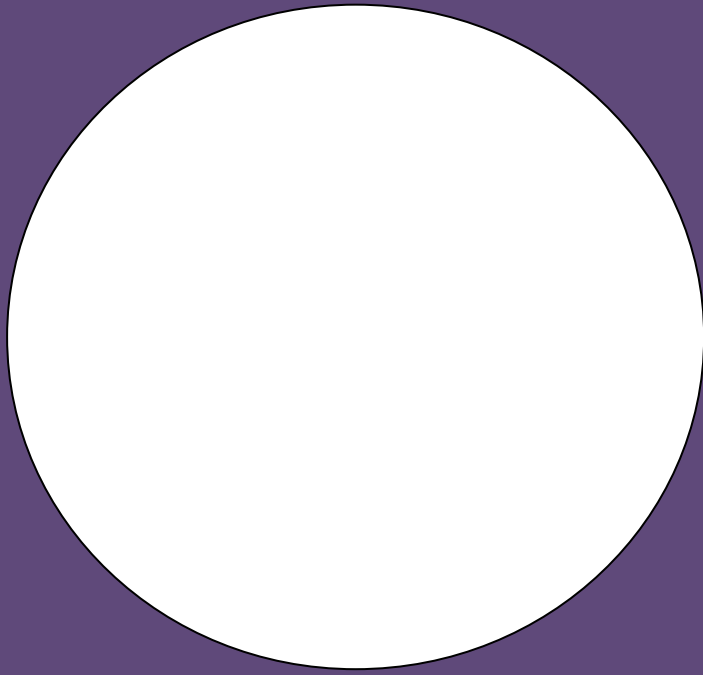
**Organ:** Proventriculus

**Stain:** H&E

**Lesion:** Proventriculitis (Avian encephalomyelitis )

**Microscopic findings:**

- 1- Multifocally, there are perivascular, nodular aggregates of lymphocytes expanding the tunica muscularis compressing adjacent tissue



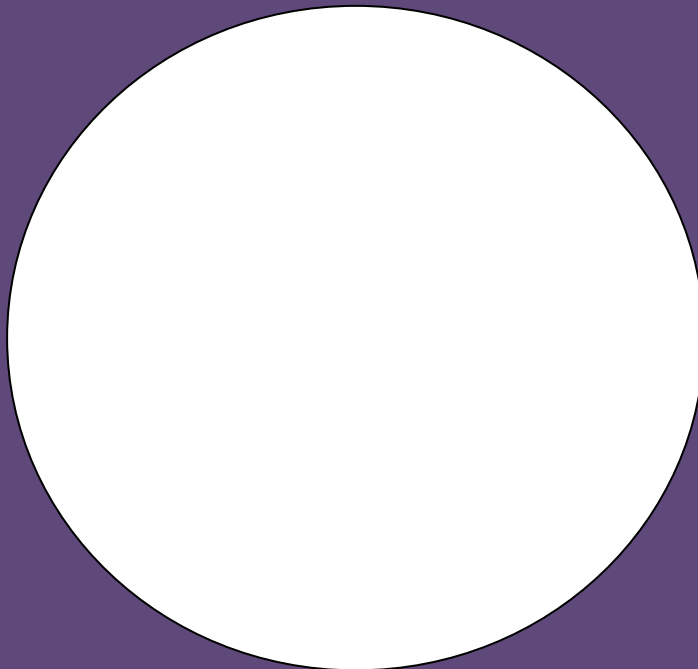
**Organ:** Esophagus

**Stain :** H&E

**Lesion :** erosive esophagitis (**Bovine viral diarrhea**)

**Microscopic findings :**

- 1- multifocal well demarcated mucosal erosions
- 2- Mucosal epithelium show severe vacuolar degeneration or necrosis in form of pyknosis and karyolysis admixed with many degenerate neutrophils (microabscesses), fibrin, and fewer numbers of eosinophils and lymphocytes with mild hemorrhage.
- 3- Low numbers of similar inflammatory cells are present within the subjacent submucosa.



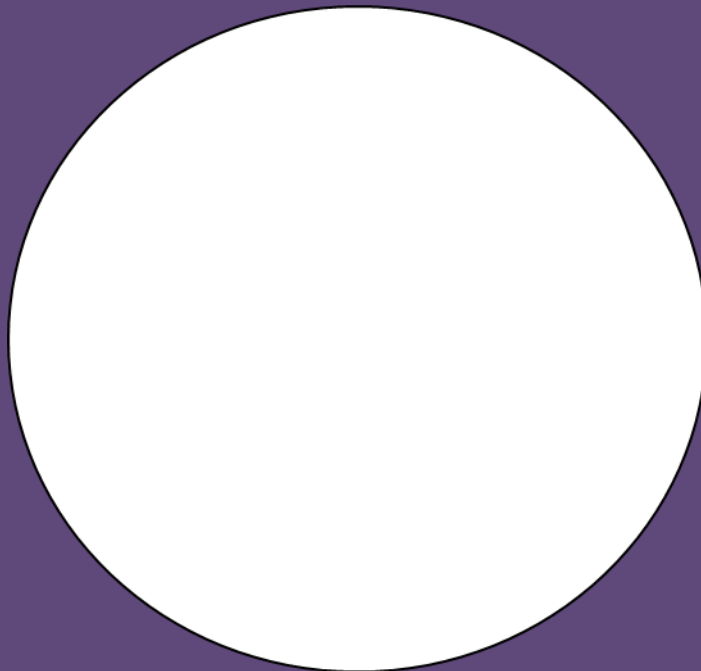
**Organ:** tongue

**Stain :** H&E

**Lesion :** ulcerative glossitis (**blue tongue** )

**Microscopic findings:**

- 1- Epithelium is ulcerated and replaced by a serocellular exudate (neutrophils, necrotic debris, and eosinophilic granular material (serum and fibrin).
- 2- the adjacent intact epithelium is expanded by intracellular edema
- 3-subepithelial connective tissue and skeletal muscle contains hemorrhage, fibrin, increased clear space, and ectatic lymphatics (edema).



**Organ:** tongue

**Stain :** H&E

**Lesion :** subepithelial hemorrhage (**blue tongue** )

**Microscopic findings:**

1. subepithelial connective tissue and skeletal muscle contains hemorrhage, fibrin, increased clear space, and ectatic lymphatics (edema).

