**Diseases of the Respiratory System**

**EPISTAXIS AND HEMOPTYSIS**

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**- Epistaxis is bleeding from the nostrils regardless of the origin of the hemorrhage, and**

**- Hemoptysis is the coughing up of blood, with the hemorrhage usually originating in the lungs.**

**- Both epistaxis and hemoptysis are important clinical signs in cattle and horses.**

**- The bleeding may be in the form of a small volume of blood-stained serous discharge coming from the nose only, or it can be a large volume of whole blood coming precipitously from both nostrils and sometimes the mouth. - The first and most important decision is to determin e the exact location of the bleeding point.**

**ETIOLOGY  
Epistaxis occurs commonly in the horse and may be due to lesions in the nasal cavity, nasopharynx, auditory tube diverticulum (guttural pouch) or lungs  
Exercise-induced pulmonary hemorrhage is described under that heading earlier in this chapter.  
Hemorrhagic lesions of the nasal cavity, nasopharynx, and guttural pouch in the horse usually cause unilateral epistaxis of varying degree depending on the severity of the lesions.  
 Pulmonary lesions in the horse resulting in hemorrhage into the lumen of the bronchi also result in epistaxis.   
Blood originating from the lungs of the horse is discharged most commonly from the nostrils and not the mouth because of the horse's long soft palate.**

**Also, blood from the lungs of the horse is not foamy when seen at the nose because the horizontal position of the major bronchi allows blood to flow out freely without being coughed up and made foamy.  
 It was previously thought that upper respiratory tract hemorrhage could be distinguished from lower respiratory tract hemorrhage by the blood in the latter case being foamy.   
This does not apply in the horse. Froth is usually the result of pulmonary edema, in which case it is a very fine, pink, stable froth.  
Bleeding from lesions of the upper respiratory tract of horses usually occur spontaneously while the horse is at rest.**

**One of the commonest causes of unilateral epistaxis in the horse is mycotic ulceration of the blood vessels in the wall of the guttural pouch (guttural pouch mycosis).  
 Other less common causes of nasal bleeding include hemorrhagic polyps of the mucosa of the nasal cavity or paranasal sinuses, and encapsulated hematomas, which look like hemorrhagic polyps, commencing near the ethmoidal labyrinth and expanding into the nasal cavity and the pharynx.   
There is respiratory obstruction, coughing, choking, and  
persistent unilateral epistaxis.   
The capsule of the hematoma is respiratory epithelium.  
Surgical correction has been achieved.  
Another cause, most uncommonly, is a parasitic arteritis of the internal carotid artery as it courses around the guttural pouch .**

**Mild epistaxis is a common finding in horses and of cattle with severe thrombocytopenia.   
Erosions of the nasal mucosa in glanders, granulomatous and neoplastic diseases and trauma due to passage of a nasal tube or endoscope, or from physical trauma externally, are other obvious causes.  
A case of fibrous dysplasia in the ventral meatus of a horse with epistaxis is recorded.  
Similarly, in congestive heart failure and purpura hemorrhagic a there may be a mild epistaxis.  
Neoplasia, and notably hemangio­sarcoma, of the upper or lower respiratory tract can cause epistaxis.  
Envenomation of horses by rattle­snakes in the western USA caused a clinical syndrome that includes swelling of the head, dyspnea, and epistaxis.  
Poisoning by bracken fern or moldy sweet clover is a common cause of spontaneous epistaxis in cattle.   
The epistaxis may be bilateral, and hemorrhages of other visible and subcutaneous mucous membranes are common.  
 An enzootic ethmoidal tumor has been described in cattle in Brazil and was at one time a disease of some importance in Sweden .  
The lesion occupies the nasal cavities, causes epistaxis and may invade paranasal sinuses .  
In hemoptysis in horses the blood flows along the horizontal trachea and pools in the larynx until the swallowing reflex is stimulated and swallowing occurs; or coughing is stimulated and blood is expelled through the mouth and nostrils.**

**In some horses repeated swallowing, without eating or drinking, can be a good indicator that bleeding is occurring. The origin of the hemorrhage is usually in the lungs and in cattle the usual cause is a pulmonary arterial aneurysm and thromboembolism from a posterior vena caval thrombosis, usually originating from a hepatic abscess . Recurrent attacks of hemoptysis with anemia and abnormal lung sounds usually culminate in an acute  
intrapulmonary hemorrhage and rapid death.  
 The origin of the hemorrhage in epistaxis and hemoptysis may be obvious, as in traumatic injury to the turbinates during passage of stomach tube intranasally or if systemic disease with bleeding defects is present.**

**- In many other cases, however, the origin of the hemorrhage is not obvious and special examination procedures may be required.   
- Careful auscultation of the lungs for evidence of abnormal lung sounds associated with pulmonary diseases is necessary.   
CLINICAL EXAMINATION  
The nasal cavities should be examined visually with the aid of a strong, pointed source of light through the external nares.  
Only the first part of the nasal cavities can be examined directly but an assessment of the integrity of the nasal mucosa can usually be made.  
 In epistaxis due to systemic disease or clotting defects the blood on the nasal mucosa will usually not be clotted. When there has been recent traumatic injury to the nasal  
mucosa or erosion of a blood vessel by a space-occupying lesion such as tumor or nasal polyp, the blood will usually be found in clots in the external nares.  
The nasal cavities should then be examined for any evidence of obstruction as set out in the previous section.**

**When the blood originates from a pharyngeal lesion there are frequent swallowing movements and a short explosive cough, which may be accompanied by expulsion of blood from the mouth.  
 Hematological examinations are indicated to assist in the diagnosis of systemic disease or clotting defects. Radiological examinations of the head are indicated when space- occupying lesions are suspected.  
In the horse, the use of the flexible fiberoptic endoscope will permit a thorough examination of the nasal cavities,  
nasopharynx, guttural pouch and larynx, trachea and major bronchi.**

**TREATMENT  
Specific treatment of epistaxis on the and hemoptysis depends cause.(S. equi) from traumatic injuries to the nasal mucosa does not usually require any treatment. Space- occupying lesions of the nasal mucosa may warrant surgical therapy.  
 Epistaxis associated with guttural pouch mycosis may require ligation of the affected ar tery. The ineffectiveness of therapy for exercise-induced pulmonary hemorrhage has been discussed above.   
There is no successful treatment for the hemoptysis due to pulmonary aneurysm and posterior vena caval thrombosis in cattle.**

**- General supportive therapy is as for any spontaneous hemorrhage and includes rest, blood transfusions, and hematinics.**

**References**

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