

## **Equine anhidrosis**

(Dry coat, non-sweating syndrome )

Its the disease in horses characterized by the inability to sweat effectively in response to appropriate ملائم stimuli.

### **Epidemiology...**

- 1-The disease commonly occurs in countries with hot, humid climates
- 2- The accurate prevalence of the disease is unknown; however, it has been estimated that up to 20% of horses may be affected.
- 3- Horses which affected with strenuous activities or training are more susceptible to develop anhidrosis.
- 4-The disease dose not affected with coat color, age, sex, or breed predilection.

### **Mechanisms of anhidrosis**

The mechanisms of anhidrosis are unknown. Potential pathologic mechanisms can be classified as

- 1-Either a decreased stimulation of the sweat gland
- 2- A lack of response of the gland to stimulation.
- 3- Electrolyte abnormalities

### **Clinical signs...**

- 1- Horses with normal thermoregulatory abilities will be able to reduce their body temperature to normal limits in 30 minutes after exercise, and the inability to cool out to normal temperatures within this time is indicative that a horse may be suffering from anhidrosis.
- 2- The predominant sign of anhidrosis is usually tachypnea, as Affected horses will have increased respiratory rates at rest, while body temperature and pulse rate are increased.
- 3- Horses showing evidence of respiratory distress will have respiratory rates between 60 and 120 breaths per minute
- 4- Horses with acute onset anhidrosis may demonstrate a partial or complete absence of sweating when exposed to appropriate stimuli. however A decrease in the rate of sweating also indicates the possibility of anhidrosis. The sweating rate will depend on the intensity of exercise, duration of exercise, and ambient temperature.
- 5- Horses with long-standing anhidrosis may reveal dry, flaky مقشر skin, alopecia, lethargy, anorexia, and a decreased water intake.
- 6- Areas on the body that may retain the ability to sweat include those under the mane العرف, in the saddle and halter الرسن areas, and in the axillary, inguinal, and perineal regions.

## **Diagnosis of anhidrosis**

1-Diagnosis of anhidrosis can be tentatively made based on clinical signs and performance. Such as the development of increased respiratory effort and hyperthermia.

2- a semiquantitative test to evaluate sweating by induction of the sweat response, using dilute concentrations of epinephrine, or Salbutamol sulfate or terbutaline injected intradermally

....The results were read 20 minutes later. Horses with long-standing anhidrosis did not sweat whereas Normal horses sweated within 10 minutes .



**An anhidrotic horse: there is a complete lack of response**



**Response of normal horse to a semiquantitative test**

## **Treatment ....**

1- Management changes...which done by

a-Environmental control by removing anhidrotic horses from hot, humid climates and moving them to a cooler and drier environment for 10-30 days.

b- placing the animal in an air-conditioned stall.

- c- The use of fans and cooling the roof of the stall by running water on it will help maintain a cooler environment
- d- Exercising the horse during the coolest part of the day is

## 2-Medical therapies...which include

a-Electrolyte supplementation

b-Dietary supplements

Nutritional feed supplement that contains L-tyrosine, ascorbic acid, niacin, and cobalt are affective.

c-The use of Methyl dopa at 3000-4000 mg injected daily for 3-4 days to stimulated sweat glands

d-acupuncture or need puncture to stimulated sweating