

3-Mycoplasma meleagridis infection

***Definition:** is disease in which the primary lesion is **airsacculitis** in the progeny, other manifestations include **decrease hatchability, skeletal abnormalities, and poor growth performance.**

It is cause of **egg-transmitted disease** and is specific pathogen of turkeys.

***Synonyms:-**

- 1-Day-Old type airsacculitis.
- 2-Airsacculitis deficiency syndrome.
- 3-Turkey syndrome-65(Ts-65).

***Transmission:-**

1-Vertical Transmission:-

1-**M meleagridis** is transmitted primarily through **egg transmission.**

2-**Infection of female reproductive tract** occurs as endogenous infection during embryonic development, as **ascending infection from cloaca** or by **insemination of hens** with (MM) containing **semen.**

3- As in the case with the female, **Cloacal infection** detect in the **male** at the **time of hatch** can persist through **sexual maturity**, semen taken from such male will contain the organism (the **organism** remains localized in the **cloaca** and **phallus**).

2-Horizontal Transmission:-

1-Direct and indirect transmission of (MM) may occur at any stage of the bird's life.

2-Direct transmission by the **airborne** route may occur **within a hatchery or flock** (flocks separated by ¼ mile).

3-Airborne transmission in mature turkeys usually results in **high infection** rate (upto **100%**), which remains **localized** in the **sinus and trachea**.

4-Indirect transmission results from **management practices** including **sexing, artificial insemination, and vaccination** whereby mycoplasma are carried manually from infected to **noninfected turkeys** via contaminated **hands, clothing and equipment**.

***Clinical Signs:-**

1-Despite a high rate of **airsacculitis** in Poult's originating from infected dams, respiratory signs are **rarely** observed.

2-**Skeletal abnormality called TS-65** (also called airsacculitis deficiency syndrome) may be associated with (**MM egg-borne infection**, the syndrome which includes **bowing, twisting, and shortening** of the **tarsometatarsal bone** and **hock joint swelling** and **deformation of cervical vertebrae**).

3-**Stunting** and abnormal feathering are additional features of the disease.

4-**M. meleagridis** acts **synergistically** in producing **severe airsacculitis** with **M.iowae** and **Sinusitis** with **M. synoviae**.

5- **M. meleagridis** **does not** adversely affect egg producing or fertility and does not cause early incubation mortality, it cause **late incubation (25-28 days)**.

***Gross lesion:-**

1-Gross lesions, in **day-old poults** (from infected dams) are limited to **thoracic airsacs**, these lesions are characterized by **thickening of the air sac** walls with **adherence of yellow exudate** to the **tissue** and occasionally, presence of variously sized **flecks of caseous material** free in the lumen.

2-Extension of such lesions to the **abdominal air sacs** is a common occurrence by

3-4weeks of age.

3-**Skeletal lesions**, when present, (usually are associated with **severe airsacculitis**), **sternal bursitis**, synovitis and **ascites**.

4-The **Sinusitis** produce by MM and M synoviae in mixed infections contains clear mucous to caseous exudate.

***Diagnosis:-**

1-Isolation and Identification.

2-Serology:-

A-Rapid Plate (RP) test.

B-tube agglutination (TA).

C-Hemagglutination-inhibition (HI).

D-ELISA.

3-PCR.

***Treatment**

1-Tylosin.

2-Gentamicin.

3-Teteracycline.

4-Flouroquinolones (Ciproflaccin).

5-Doxycycline.