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SUPPURATIVE OTITIS IN PIGS
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SUPPURATIVE otitis, an inflammatory condition involving the deeper structures of the ear, is commonly met with in young pigs. Affected animals show characteristic symptoms the most prominent of which is the abnormal carriage of the head which is constantly held on one side and this may be accompanied by difficulty in maintaining balance and direction.

The disease is usually secondary to infections of the respiratory tract and is most frequently encountered on piggeries where infectious pneumonia and catarrh are prevalent. The infection reaches the ear by way of the Eustachian tube, a narrow passage which leads from the pharynx or throat to the middle ear. When the disease has become established, recovery is unlikely to occur and since there is no effective method of treatment, the destruction of affected animals becomes necessary.

Since the condition occurs as a complication of diseases of the respiratory tract the adoption of measures for the control of such diseases, which will include attention to sanitation, housing and feeding, offers the best means for its prevention.

SYMPTOMS

The disease occurs principally among young pigs from a few weeks to about four months old, and here it should be noted that such animals are at an age when they are most highly susceptible to pneumonia and associated respiratory infections, which points to a definite association between the two conditions.

The outstanding symptom is the abnormal carriage of the head which is constantly held on one side, the affected ear being depressed and carried at a lower level than the normal one. Sometimes there is a tendency to walk in circles, the animal moving in the direction of the affected ear, i.e., if the right ear is affected the animal will circle to the right. In the more advanced cases the animal has difficulty in maintaining its sense of direction and balance. The gait becomes unsteady and the animal may have difficulty in walking in a straight line often making several attempts before it is able to reach the feeding trough. When driven, an affected pig may fall to the ground, struggling violently before it is able to regain its feet. In the later stages of the disease the animal is quite unable to maintain its equilibrium and cannot remain on its feet at all.
The condition is usually confined to one ear. Sometimes, however, both ears become affected and, although the head may be carried evenly, unsteadiness of gait and difficulty in maintaining balance are marked.

Affected animals are usually in poor condition, become stunted and unthrifty, and are never profitable to maintain.

While the disease is largely confined to young pigs it may affect older animals and has occasionally been observed both in baconers and breeding sows.

**CAUSE**

The disease is caused by a microorganism known as *Corynebacterium pyogenes*. This organism is frequently implicated in infections of the respiratory tract including pneumonia and catarrh of the upper respiratory passages. From the throat or pharynx the infection spreads along the Eustachian tube to the middle ear subsequently extending to the internal ear. Here it sets up an inflammatory reaction accompanied by suppuration or pus formation.

The ear consists of three parts (1) The external ear; a funnel shaped organ which collects the sound waves and conveys them along a narrow canal or meatus to the tympanic membrane or ear-drum. (2) The middle ear which is separated from the external ear by the tympanic membrane and communicates with the pharynx by the Eustachian tube. It contains a chain of small bony structures known as auditory ossicles by means of which the sound vibrations from the tympanic membrane are transmitted to the internal ear. (3) The internal ear. This is a complex structure which in addition to transmitting the sound impressions received from the middle ear to sensory areas in the brain has another important function, viz., the maintenance of equilibrium. It is by means of certain structures in the internal ear that an animal is enabled to retain its balance.

The symptoms which occur, i.e., unsteadiness and incoordination of gait and impairment of the sense of balance are directly related to disease of these deeper structures.

**POST-MORTEM APPEARANCES**

Externally no abnormalities are usually observed.

Occasionally when rupture of the tympanic membrane has occurred a brownish yellow sticky discharge may be noticed exuding into the passage of the external ear. In order to expose the focus of infection a careful dissection is necessary involving the removal of the overlying bony structures by means of a saw or other suitable instrument. When these structures have been removed an accumulation of thick cheesy pus will be observed in the cavity of the middle ear.

**TREATMENT AND PREVENTION**

No effective method of treatment is available and since affected pigs remain stunted and unthrifty and recovery is unlikely to occur they are better destroyed as soon as the symptoms have become established. While there is no direct means of preventing the disease it should be recognised that it is usually secondary to infections of the respiratory tract particularly infectious pneumonia. Consequently if it is possible to control these respiratory diseases then it should be possible to prevent otitis or at all events to greatly reduce the number of cases which are likely to occur. The measures which should be adopted in this connection must include careful attention to sanitation, housing, and feeding and these will be practiced as a matter of course on all well managed piggeries. These measures were described in some detail in the December, 1945, issue of this Journal in an article which appeared under the heading “Infectious Pneumonia of Pigs”. This was reprinted as Leaflet No. 842.