



Lecture title: Post Mortem Inspection

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Summary:

Routine postmortem examination of a carcass should be carried out as soon as possible after the completion of dressing in order to detect any abnormalities so that products only conditionally

fit for human consumption are not passed as food. All organs and carcass portions should be kept together and correlated for inspection before they are removed from the slaughter floor. Postmortem inspection should provide necessary information for the scientific evaluation of pathological lesions pertinent to the wholesomeness of meat. Professional and technical knowledge

must be fully utilized by:

1. *viewing, incision, palpation and olfaction techniques.*
2. *classifying the lesions into one of two major categories - acute or chronic.*
3. *establishing whether the condition is localized or generalized, and the extent of systemic changes in other organs or tissues.*
4. *determining the significance of primary and systemic pathological lesions and their relevance to major organs and systems, particularly the liver, kidneys, heart, spleen and lymphatic system.*
5. *coordinating all the components of antemortem and postmortem findings to make a final diagnosis.*
6. *submitting the samples to the laboratory for diagnostic support, if abattoir has holding and refrigeration facilities for carcasses under detention. It is important to differentiate between a localized or ageneralized condition in the judgement of an animal carcass. In a localized condition, a lesion is restricted by the animal defense mechanisms to a certain area or organ. Systemic changes associated with a localized condition may also occur. Example: jaundice caused by liver infection or toxemia following pyometra (abscess in the uterus).*



In a *generalized* condition, the animal's defense mechanisms are unable to stop the spread of the disease process by way of the circulatory or lymphatic systems. The lymph nodes of the carcass should be examined if pathological lesions are generalized. Some of the signs of a generalized disease are:

1. Generalized inflammation of lymph nodes including the lymph nodes of the head, viscera and/or the lymph nodes of the carcass
2. Inflammation of joints
3. Lesions in different organs including liver, spleen kidneys and heart
4. The presence of multiple abscesses in different portions of the carcass including the spine of ruminants

Generalized lesions usually require more severe judgement than localized lesions.

An acute condition implies that a lesion has developed over a period of some days, whereas a chronic condition implies the development of lesions over a period of some weeks, months or years. A subacute condition refers to a time period between an acute and chronic condition.

The acute stage is manifested by inflammation of different organs or tissues, enlarged haemorrhagic lymph nodes and often by petechial haemorrhage of the mucosal and serous membranes and different organs such as heart, kidney and liver. An acute stage parallels with the generalized disease complex, when an acute infection tends to overcome the animal's immune system and becomes generalized.

Each case showing systemic lesions should be assessed individually taking into account the significance that these lesions have towards major organ systems, especially the liver, kidneys, heart, spleen and lymphatic system as well as the general condition of the carcass.

In a chronic condition, inflammation associated with congestion is replaced by adhesions, necrotic and fibrotic tissue or abscesses. The judgement in the chronic stage is less severe and frequently the removal of affected portions is required without the condemnation of the carcass. However, judgement on the animal or carcass judgement tends to be more complicated in subchronic and sometimes in peracute stages. If generalized necrotic tissue is associated with previous infection, carcass must be condemned.

Guidelines For Minimum Postmortem Inspection Requirements (Cattle, Horses, Sheep & Goats)



Heads

General View external surfaces. For cattle, horses, pigs and game view the oral and nasal cavities. With examination of Submaxillary , Parotid and Retropharyngeal Lymph nodes and View of masseter muscle and some time incise by multiple incision or slicing.

Tongue View and palpate (view only in calves up to 6 weeks of age).

Viscera

Lungs : View and palpate. Except in sheep and goats, the bronchi should be opened up by a transverse incision across the diaphragmatic lobes. For horses and cattle, the larynx, trachea and main bronchi should be opened along their length. Lymph nodes: Bronchial (tracheobronchial) and mediastinal:

Incise, **Heart** View after the removal of the pericardium. Additional inspection requirements for cattle as per.

Liver

View and palpate entire surface (both sides). View the gall bladder. For cattle over 6 weeks of age, incise as deemed appropriate to detect liver flukes. Open large bile ducts. For sheep, pigs and game, incise as deemed appropriate for parasite. Lymph nodes: Portal (hepatic), view and incise

Spleen: Palpate

Gastrointestinal tract : View , Mesenteric lymph nodes, View **Kidneys:** View after enucleation. In grey and white horses -Incise. **Uterus** (adults), View **CARCASS: General**

Examine carcasses (including musculature, exposed bones, joints, tendon sheaths etc.) to determine any signs of disease or defect. Attention should be paid to bodily condition, efficiency of bleeding, colour, condition of serous membranes (pleura and peritoneum), cleanliness and presence of any unusual odours.

Lymph nodes 1: Superficial inguinal (male) – Palpate Supramammary (female) - Palpate (a) External and internal iliac - Palpate (b) Prepectoral - Palpate Popliteal - Palpate (only sheep/goats and game/antelope) Renal - Palpate (cattle, horses, pigs) or incise if diseases is suspected. Prescapular & prefemoral - Palpate (only sheep and goats) The muscles and the lymph nodes (lymphonodi sub-rhomboidei) beneath one of the two scapular cartilages of all grey or white horses should be examined for melanosis after loosening the attachment of one shoulder.

Carcass judgement , Trimming or condemnation may involve:

1. Any portion of a carcass or a carcass that is *abnormal* or *diseased*.



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2. Any portion of a carcass or a carcass affected with a condition that may present a *hazard to human health*.
 3. Any portion of a carcass or a carcass that may be *repulsive to the consumer*.

The final decision as to the fitness of carcass and offal for human consumption rests with the veterinary inspector , who must have the authority to stop slaughter or dressing operator on grounds of lack of hygiene , defective dressing techniques ,lack of consideration for animal welfare , or inadequate inspection