HEALTH 4 WEALTH

Australian Government
Department of Agriculture, Water and the Environment

animalhealth AUSTRALIA

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LIVER ABSCESS

KEY MESSAGES

1. Liver abscesses can cause significant production losses.
2. Liver abscesses are predominantly caused by dietary issues.

What is liver abscess?

Liver abscess is a disease of the liver marked by inflammation, infection and necrosis of the liver. Lesions that occur on the liver are pale yellow, often spherical with necrosis of the liver cells and the surrounding area which leads to inflammation of the liver.

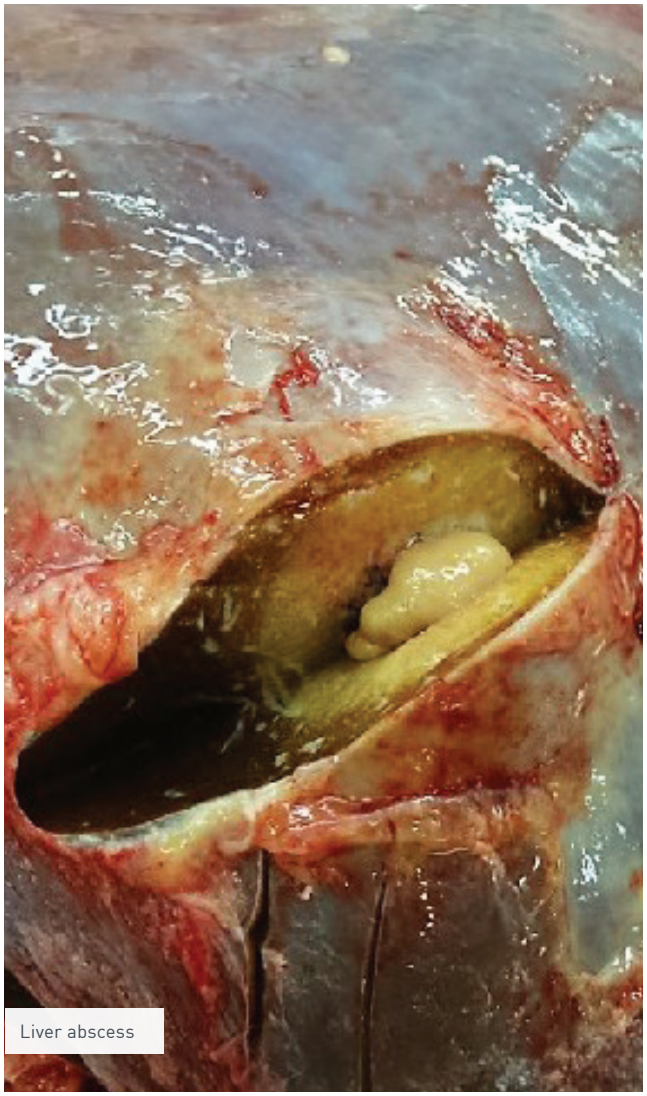
Fusobacterium necrophorum, an anaerobic bacterium, is the primary agent of the disease leading to liver abscess. This bacterium is found in rumen lesions caused by acidosis and subsequently escapes into the blood stream before being filtered by the liver, which results in the formation of abscesses.

Abscesses are found in all ages and breeds of cattle and under all types of management, but most cases are found in beef cattle from feedlots due to a high grain content diet. Specific breeds such as Holsteins are also predisposed to a high risk of liver abscess.

How are liver abscesses caused?

The disease is initiated by a physical opening in the rumen outer layer, allowing normally contained bacteria to enter the blood steam.

Acidosis is often the first step in creating an entrance point for bacteria in the rumen. It involves excessive lactic acid produced in response to a diet with increased levels of high carbohydrate and low fibre, grain-based feeds or introducing new feed too quickly. This excessive acid production in the rumen leads to a weakening of the overall structural strength of the outer wall, creating a higher risk of bacteria being able to enter the blood.



Liver abscess

Source: MINTRAC

Disease at the feedlot

Abscess is the primary liver abnormality presented in feedlot cattle at slaughter. There is an increased rate in feedlots due to acidosis from high grain diets. Up to 10-20% of feedlot cattle can have abscesses, dependant on type of feed and feed management processes and level of monitoring of the cattle.

Feedlot cattle with abscessed livers have reduced feed conversion efficiency, and those with severely abscessed livers gain significantly less per day than cattle without abscesses, reducing production rate and the resulting carcass weight.

Picture at the abattoir

An abscess in the liver will lead to the condemnation of the whole liver.

Treatment

The disease often goes untreated as there can be a lack of visible signs. The disease is found at slaughter or suspected with reduced production efficiency, which is a common sign for a broad range of illnesses and diseases that affect beef cattle. Because it can be difficult to diagnose liver abscess, but a significant amount of cattle may have it, preventative measures are often undertaken rather than treatment.

Treatment usually involves antibiotics, but these should be only be used in consultation with your veterinarian.

Prevention

Change of diet is key to preventing the acidosis that leads to liver abscesses occurring. An increase in fibre and a decrease in the amount of carbohydrate-rich grain provided should minimise of the incidence of liver abscesses in cattle. Consult with your veterinarian and/or nutritionist about nutritional management and other preventative measures (e.g. managing ration transitions leading up to a finishing diet).

FORMATION OF LIVER ABSCESSES