FACTSHEET

Displaced abomasum

What is displaced abomasum?

Displaced abomasum (DA) occurs when the abomasum, which is the fourth or 'true' stomach of the cow, floats from its natural midline position to the left (left displaced abomasum or LDA) or to the right (right displaced abomasum or RDA). DA has a high economic and welfare cost.

The direct costs of correction of LDA are obvious (ranging from £200–£300) but the hidden costs including discarded milk, reduced milk yield, reduced fertility performance and increased culling risk make this a significant economic condition.

LDA is often secondary to other diseases that also have a negative impact on welfare.

Causes

Multiple factors are involved when abomasal displacement occurs. Following calving, the empty uterus and poor rumen fill leave more space in the abdomen for the abomasum to float. A concurrent milk fever or ketosis can make the abomasum atonic (not contracting normally) and consequently filled with gas. The combination of these factors can result in the abomasum floating from its normal position at the base of the abdomen to the left side of the rumen. The abomasum can also move to the right side; while this situation is less common, it is more dangerous because the abomasum may flip over and even twist (torsion), with serious risk for the survival of the cow if not promptly treated.

DAIRY

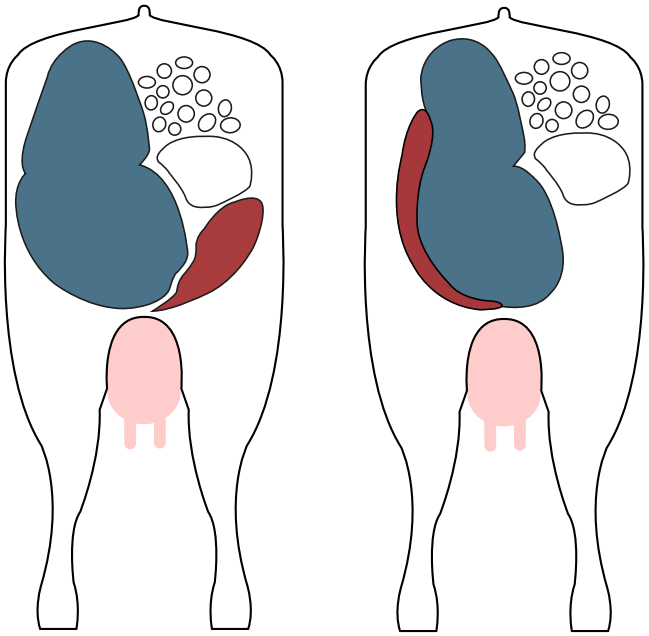

Figure 1. Seen from behind. Left: normal position of rumen (blue) and abomasum (red). Right: position during an LDA

What are the risk factors for DA?

- LDAs are most commonly seen in the late winter and early spring when cows are housed
- LDA is more common in:
  - Holstein breed (high yields, deeper abdomen)
  - Multiparous cows
  - Both overconditioned and thin cows. Cows with BCS >3.5 at calving have lower dry matter intake, higher risk of fat mobilisation and ketosis, which all lead to increased risk of LDA
- Concurrent diseases increase the risk of LDA (50% of cows with LDA have an underlying disease). These include:
  - Retained fetal membranes and uterine infection
  - Ketosis (both a risk factor for and a consequence of DA). Cows with ketosis are 4.4 times more likely to develop an LDA
  - Milk fever – hypocalcaemia reduces the muscle contractility in the abomasum (atony), predisposing it to filling with gas. Milk fever is also associated with poor intakes and ketosis, which both increase the risk of LDA
  - Endotoxaemia (from bacterial infection such as metritis or mastitis). Endotoxaemia can cause abomasal atony
- Low dry matter intake (DMI)
- High concentrate and low fibre diets increase the risk of LDA. Herds feeding a high percentage of maize silage tend to get more LDAs

What is an acceptable level of DA?

Annual incidence worldwide ranges from 0.05–6% (0–25% in individual herds). The target incidence in your herd depends on your yield.

If your yield is less than 8,000–8,500 kg/cow/year, then zero DAs would be acceptable

If your yield is more than 8,500 kg/cow/year, then your target would be <2%; investigate with your vet and nutritionist if incidence is 3% or above.

What are the signs of LDA?

A cow with DA will typically be in her 3rd–5th lactation and in her first month after calving, with a peak incidence at about two weeks. Main signs are poor milk yield (often a sudden drop in yield), reduced rumination and refusal of concentrates, while continuing to consume forage. Your veterinarian will confirm the diagnosis. In the absence of treatment, cows with an LDA will have reduced appetites, lose weight and fail to thrive. A cow with an RDA could easily die if the condition is untreated.

Treatment

Speak immediately with your vet when any cows show signs of DA, for a correct diagnosis and prompt treatment. Treatment of any underlying conditions prior to or in parallel with correction of the LDA are critical to ensure good outcomes.

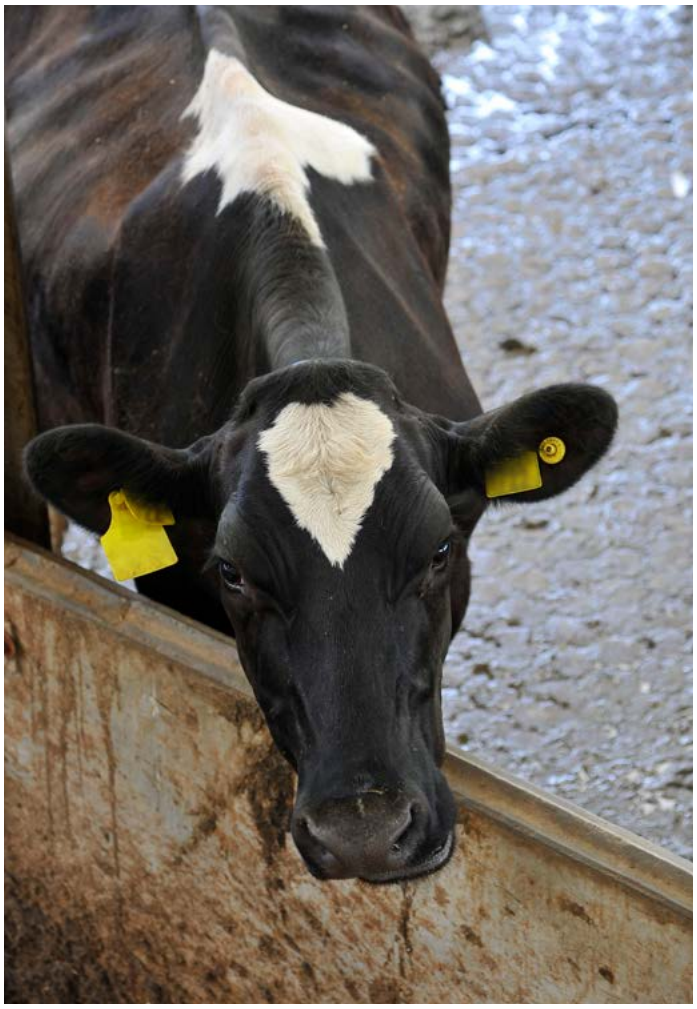

Figure 2. Under-conditioned cow

Figure 3. Rumen fill assessment area shaded in red

Preventative strategies

Herd level

- Monitor and prevent periparturient diseases (milk fever, ketosis and uterine disease)
- Maximise rumen fill
  - Ensure adequate feed space during transition and in fresh group, if present (>1m/cow), good feed access and continuous feed availability. To enhance intake, for example, offset neck rail or use a flexible rail, angle locking head yokes, or install a smooth feed surface
- Minimise group changes around transition, particularly in the final week pre-calving
- Do not overfeed dry cows, and maintain a correct body condition score throughout the transition period and beyond. Feed a low energy density ration to increase rumen fill without oversupplying energy

As a general rule, cows should not gain condition during the dry period and should not lose 1 BCS point or more between calving and peak yield. Target loss is 0.5.

- Monitor negative energy balance by measuring BHB and NEFA pre- and post-calving

Individual level

- Identify and treat concurrent diseases in conjunction with your veterinary surgeon
- Oral fluid therapy can help restore rumen volume and increase feed intake in a cow with reduced appetite
- Propylene glycol – oral dosing once or twice daily with 300 ml propylene glycol

Produced for you by:

AHDB
Stoneleigh Park
Kenilworth
Warwickshire
CV8 2TL

T 024 7669 2051
E comms@ahdb.org.uk
W ahdb.org.uk
@AHDB_Dairy

If you no longer wish to receive this information, please email us on **comms@ahdb.org.uk**

40014 0822