



How can cows with photosensitisation of the teats be managed?

Lesions due to photosensitisation are largely confined to non-pigmented areas of skin exposed to sunlight and may therefore be evident on the outer surfaces of light coloured teats of affected cows.

Photosensitisation usually occurs when photodynamic agents are retained in the bloodstream rather than being excreted at normal rates in the bile. The most common agent is a breakdown product of chlorophyll called phylloerythrin. Phylloerythrin circulates through the blood and interacts with ultraviolet light in poorly pigmented skin. Cows can be affected by photosensitisation when grazing lush spring pastures due to a high chlorophyll intake. Events that disrupt liver function or cause bile stasis may also trigger an episode. Examples of conditions where photosensitisation is secondary to liver damage include lantana poisoning and facial eczema.

Cows with early photosensitisation of the teats may be restless and kick at their abdomens (because the affected areas are very itchy). Affected skin becomes red and oedematous but changes may not be noticed until the top layers of skin die and become hard, dry and leathery, or sheets of dead skin flake off.

Diagnosis is based on clinical presentation, especially the type and distribution of lesions. Veterinarians may take blood samples to check the liver enzymes and determine whether there is on-going liver damage. Although photosensitisation is usually associated with liver dysfunction, liver enzymes may not be elevated even in cows with severe photosensitive dermatitis because:

- high levels of circulating phylloerythrin can precede liver damage; and
- not all liver dysfunction manifests as overt changes in liver tissue or liver enzymes.

The incidence of photosensitisation may be higher in cows induced to calve with corticosteroids. Sometimes the dermatitis is so severe that milking is virtually impossible.

Management of cows with photosensitisation generally involves:

- ensuring that the cows have access to shade at all times, and possibly housing severely affected animals in shed;
- administering anti-histamines and anti-inflammatory drugs (e.g. flunixin) in early cases;
- treating teat lesions as indicated – some lesions may become infected and require antibiotic treatment;
- applying black photosensitisation ointment to teats and exposed parts of the udder;
- preventing new cases – by changing the diet if the feed is thought to be contributing to the problem, or possibly applying teat ointment to darken light-coloured skin. In districts where facial eczema is likely to occur, specific measures to reduce the incidence of facial eczema should be discussed with a veterinarian;
- further investigation – if the cause of an outbreak is unclear.