

PRESUMED PLANT POISONINGS OF UNCERTAIN CAUSE

“Humpy back” of sheep

A locomotor disorder of full-woolled sheep in summer in western Queensland when stressed by exercise (mustering). Hyperthermia has been recorded in affected sheep (Pearse *et al.* 199). The cause of the disease is undetermined, but plant poisoning is suspected. *Solanum esuriale*, *Malvastrum spicatum* and *Sida* spp. have all been associated with incidents of the disease. Sutherland (19) reported reproducing the clinical syndrome in sheep fed fruit of *Solanum esuriale* and then exercised in a hot room. He did not record results of pathological examinations. McMeniman (1976) reported producing the clinical syndrome in sheep fed *S. esuriale* fruits, but his experimental animals came from the area in which the disease was recorded and may have been subclinically affected before the experiment, rendering his results questionable. Dunster & McKenzie (1987) fed *S. esuriale* fruits to sheep sourced from outside the known range of the disease and exercised them in a hot room, but did not produce any clinical signs.

Pathology:

- Wallerian degeneration of spinal cord white matter (O’Sullivan 1976)
- myodegeneration of hind limb skeletal muscle (O’Sullivan 1976)
- focal myocardial degeneration & necrosis (RA McKenzie, unpublished data)

References:

- Bourke CA (1995) The clinical differentiation of nervous and muscular locomotor disorders of sheep in Australia. *Aust. Vet. J.* **72**:228-234.
- Dunster PJ, McKenzie RA (1987) Does *Solanum esuriale* cause humpyback in sheep? *Aust. Vet. J.* **64**:119-120.
- McBarron EJ (1977) *Medicinal and Veterinary Aspects of Plant Poisons in New South Wales*. Dept of Agric. New South Wales, Sydney. p.111.
- McMeniman NP (1976) *Solanum esuriale*, a possible cause of humpy back in sheep. *Aust. Vet. J.* **52**:423-424.
- O’Sullivan BM (1976) Humpy back of sheep. Clinical and pathological observations. *Aust. Vet. J.* **52**:414-418.
- Pearse B, Peucker S, Hoey WA (199) *Aust. Vet. J.*
- Sutherland AK (19) Unpublished DPI report

“Gomen disease” of horses in New Caledonia

Ataxia (mostly posterior) of horses grazing in the north-western part of New Caledonia.

Recognised since the 1940s around the town of Gomen; recently seen around Voh

Chronic, progressive, fatal 3-4 year course. Signs take 1-2 years to become apparent after horses imported to the area.

Pathology: Cerebellar degeneration – thinning of molecular cell layer, loss of Purkinje cells and loss of granule cells

Cause unknown; suspected toxicity, possibly a plant or a plant accumulating metals.

Reference:

- LeGonidec G, Kuberski T, Daynes P, Hartley WJ (1981) A neurological disease of horses in New Caledonia. *Aust. Vet. J.* **57**:194-195.

“Scrub ataxia” of suckling calves in south-eastern Queensland

Occurrence: Mt.Perry (Gin Gin) 1977, 1978, 1979, 1981 (2 herds), Laidley/Rosewood 1978,

Bundaberg 1986, Monto 2002 (DPI Natural Toxins Database, unpublished records)

Syndrome: unweaned calves from about 6 weeks old; not affected at birth; cows unaffected; posterior incoordination with head held high, lesions on knees and coronets; in some cases there are crusty skin lesions around the eyes ± face and back; some cases have diarrhoea; severity of ataxia increases if exercised; recovery if moved to paddocks without scrub (TJ Brazier unpublished data 1986)

Circumstances: Cases occur only in certain paddocks (with scrub) of certain properties; seen after winter co-incides with a period of scarcity and poor quality feed (TJ Brazier unpublished data 1986)

Pathology: mild Wallerian degeneration of spinal cord white matter tracts, worst in lumbar region; mild degeneration of cerebellar Purkinje cells (MWM Hill, R Sutton unpublished data 1978, 1981)

Suspected *Lantana camara* Common Pink biotype poisoning; feeding trial negative (MWM Hill unpublished data 1978)

Blood copper and phosphorus concentrations normal. No pathogens detected in skin lesions.

Citrus pulp (citrinin?)

Reported from UK, Holland, USA

Pathology: haemorrhage & eosinophilic granulomas similar to those of *Vicia* spp. (*q.v.*)

References:

Review literature

Longstaffe JA (1989) Pruritis, pyrexia and haemorrhage, syndrome in cattle. *Vet. Annual* **29**:64-68.

General literature

Breukink HJ, Gruys E, Holzhauer C, Westenbroek ACJM (1978) Pyrexia in dairy cows. *Vet. Rec.* **103**:221-222.

Griffiths IB, Done SH (1991) Citrinin as a possible cause of the pruritis, pyrexia, haemorrhagic syndrome in cattle. *Vet. Rec.* **129**:113-117.

Mathews JG, Shreeve BJ (1978) Pyrexia/pruritis/haemorrhagic syndrome in dairy cows. *Vet. Rec.* **103**:408.

Polack E, Freels K, Hutchins T, Wilkes R, Saunders G, Blodgett D (1998) Systemic haemorrhagic and granulomatous disease in cows fed citrus pulp. *Vet. Pathol.* **35**:436 [Abstract 78]

Saunders G, Hutchins T, Blodgett D (1998) Suspected citrus pulp toxicity in dairy cattle. *Vet. Pathol.* **35**:434 [Abstract 72]

Saunders GK, Blodgett DJ, Hutchins TA, Prater RM, Robertson JL, Friday PA, Scarratt WK (2000) Suspected citrus pulp toxicosis in dairy cattle. *J. Vet. Diagn. Invest.* **12**:269-271.

Thomas GW (1978) Pyrexia with dermatitis in dairy cows. *Vet. Rec.* **102**:368.

Turner SJ, Kelly DF, Spackman D (1978) Pyrexia with dermatitis in dairy cows. *Vet. Rec.* **102**:488-489.