

Skin Diseases of Cattle

Types of skin disease in cattle

- Alopecia
- Dermatitis
- SubQ emphysema
- SubQ edema
- SubQ hematoma
- Hyperkeratosis
- Parakeratosis
- Exema
- Insolatio, siriasis (physical causes)
- Combustiones, congelationes (physical causes)
- Urticaria (allergic)
- Photosensitising diseases (types 1-4)
- Trichophytiasis (fungal)

Infectious causes (primarily causing skin lesions)

- Fibropapillomas
- Ringworm
- Dermatophilosis (Streptothricosis)

Infectious diseases with dermatological manifestations

- Pseudorabies
- Malignant catarrhal fever
- Paravaccinia scrotal infections of bulls
- Bluetongue
- BVDv
- Papular stomatitis
- Bovine dermatotropic herpesvirus (pseudo-lumpy skin)

Neoplastic skin diseases

- Lymphosarcoma
- Angiomatosis (Hemangioma)
- Mastocytosis
- Lipomatosis
- Melanomas
- Squamous Cell Carcinomas

Allergic/Immune-mediated skin diseases

- Urticaria
- Angioedema
- Anaphylaxis
- Contact dermatitis

Physical agents causing skin diseases

- Thermal injury (sun, fire, frostbite)
- Gangrene
- Photosensitisation

Congenital and inherited skin diseases

- Lethal hypotrichosis
- Viable hypotrichosis
- Hypotrichosis as BVDv-induced congenital disease
- Baldy calf syndrome
- Streaked hypotrichosis
- Hypotrichosis and missing incisors
- Hypotrichosis with hypophyseal hypoplasia
- Inherited parakeratosis (lethal trait A46)
- Ichthyosis fetalis
- Ichthyosis congenital
- Epitheliogenesis imperfecta (aplasia cutis)
- Dermatosparaxis (cutaneous asthenia) (Hereditary collagen dysplasia)

Miscellaneous skin diseases of cattle

- Anagen defluxation
- Urine or fecal scalding
- Leukotrichia
- Leukoderma
- Alopecia areata
- Buckskin Holsteins

Parasitic diseases with skin involvement

- Hypodermiasis (warbles, grubs)
- Louse infestation
- Flies
- Tick-borne diseases
- Mange (Chorioptic. Demodectic. Psoroptic)

Chemical and nutritional causes of dermatologic disease

- Cu deficiency
- Molybdenum toxicity
- Iodine toxicity
- Iodine deficiency
- Zinc deficiency
- Selenium toxicity
- Arsenic toxicity (chronic)
- Chlorinated naphthalene toxicosis (X disease)
- Polybrominated biphenyls toxicosis
- VitC deficiency in calves

Lice causing skin disease

Sucking:

Haematopinus eurysternus

Linognathus vituli

Solenopotes capillatus

Biting:

Damalinea bovis

Flies causing painful nodules

- *Haematobia* (horn fly)
- *Stomoxys calcitrans* (stable fly)
- Tabanid horse fly (cleg)

Fly causing painful vesicle (near river)

- *Simulium* (blackflies)

Flies causing open wounds/lesions on lower abdomen, udder, teats :

- Haematobia irritans
- Hydrotaea irritans

Types of mange found in cattle, causal species

- Chorioptic (Chorioptes bovis)
- Psoroptic (Psoroptes)
- Sarcoptic (Sarcoptes)
- Demodectic (Demodex)

Types of mange, predilection sites

- Ch: all over, esp tail head in dairy. Intense pruritis (IP)
- Ps: folds, shoulder, rump, perineum. Thick crusty skin. IP
- Sa: head, neck, shoulder. Thick crusty alopecia skin. IP
- De: nodules esp over thorax, mostly asymptomatic

Ticks causing skin disease in cattle

- Ixodes ricinis
- Dermacentor reticulatus
- Haemophysalis punctate

Causal agents of bacterial skin disease in cattle

- Staphylococcal-Staphylococcal superficial pustular dermatitis, Impetigo-like condition on udder/perineum. Non-pruritic, pustules on or near damaged skin. Staphylococcal folliculitis (pustules on hair follicles)
- Dermatophilus (uncommon)
- Actinomyces, actinobacillus Actinomycosis - skin involvement Actinomyces pyogenes. Primary lesion is lumpy jaw. SubQ abscesses/fistulae may arise, thick honey exudate. Actinobacillus may cause similar lesions.
- Mycobacterium kansasii
- Salmonella dublin septicaemia (calves)

Viral skin diseases of cattle

- Bovine viral papillomatosis
- Bovine papular stomatitis
- Bovine herpes mamillitis
- Pseudocowpox
- Cowpox
- Bovine papular stomatitis-Parapox virus, zoonotic. Small red papules, 2mm diameter, necrosis at centre. Mostly muzzle and lips Self limiting disease, no treatment necessary.
- Bovine herpes mamillitis-Bovine herpes virus 2. Severe lesions on teats/udder, edema, necrosis, sloughing. Junction btw normal/abnormal tissue is very clear (cut with a knife appearance). Ddx: FMD
- Pseudopox-Parapox virus (similar to papular stomatitis, orf). Zoonotic. Edema, then ~10 small pustules on each teat. Followed by horse shoe lesion. Immunity is short-lived, reinfection may occur.

Viral diseases causing secondary skin conditions

- FMD - muzzle, tongue, nostrils, udder, interdigital cleft.
- BHV1 (IBR) - muzzle and nostrils, possibly scrotum.
- BHV1 (infectious vulvovaginitis) - on genitalia
- Mucosal disease - diffuse stomatitis on muzzle and oral mucosa, possibly at coronary band.
- Malignant catarrhal fever - similar to mucosal disease with ocular changes.

Nutritional causes of skin lesions

- vitA deficiency
- vitC deficiency (alopecia, erythema but no pruritis)
- vitE deficiency
- Cu deficiency causes colour changes around.