Animal Welfare cases are increasing; a need for awareness and working together

By: Dr. LeeAnn Forsythe, DVM, M.Vet.Sc, Disease Surveillance Veterinarian Livestock Branch

The Saskatchewan Society for the Prevention of Cruelty to Animals (SSPCA) has had a very busy year, investigating 730 cases in the 2010/11 fiscal year. This is a 21% increase in cases (602) since 2009/10 fiscal year. Investigations involving farm animals accounted for 65% of the total cases with horses accounting for 50% of the farm cases and cattle 29%. There was a 61% (240) increase in horse cases this year over the previous year. This past year has also seen an increase in dog cases accounting for 44% (323) of the total cases (730).

The SSPCA’s investigative services respond to animal welfare concerns received by their office. Animal protection officers (APOs) are appointed by the Ministry of Agriculture and have authority under the *The Animal Protection Act* to investigate cases of animal neglect and cruelty. The SSPCA APOs receive calls from rural areas and small cities and towns that do not have the capacity to respond. The SSPCA also have limited capacity to respond to all cases across the province and therefore they work together with the Ministry of Agriculture, humane societies and SPCAs, veterinarians, Western College of Veterinary Medicine (WCVM), RCMP, rural municipalities, livestock industries and rescue groups to assist with animal welfare cases.

The Ministry provides funding to the SSPCA for the investigation of rural animal welfare complaints. The 14 humane societies and SPCAs in Saskatchewan operate independently and depend totally on fundraising and funding they may receive from operating a pound for their community. Some humane societies and SPCAs do not have an APO and therefore cannot investigate animal welfare complaints. The SSPCA does not have shelter facilities to keep companion animals and rely on SPCAs and humane societies such as the Saskatoon SPCA to assist with large dog and cat seizures. The SSPCA cannot respond to the increasing case load alone and need the cooperation and assistance of the animal welfare network mentioned above to protect the welfare of animals.
Porcine Ulcerative Dermatitis Syndrome (PUDS) in a Sow

By: Moira Kerr, Veterinary Pathologist, PDS; Rosemary Postey, Veterinary Pathologist, Manitoba Agriculture, Food and Rural Initiatives, Veterinary Diagnostic Services and Brenda Bryan, Veterinary Pathologist, Department of Veterinary Pathology, WCVM

A four year-old, fifth parity, sow was euthanized due to extensive, ulcerative and crusting skin lesions. The sow was the only animal in the herd affected. The sow was individually stalled on old concrete flooring. There was no history of sun exposure, topical contact with salt or chemicals nor recent changes in vaccine protocols, feeding or antibiotic administration. The sow was nonpruritic and the lesions were nonpainful.

Macroscopically, there were bilaterally symmetrical, annular to confluent ulcers with defined borders on the head, neck, ventral abdomen (the teats were spared), inguinal region, lateral thighs, tail head and lateral elbows (see Fig. 1 and 2). The lesions had a ‘scalded’ appearance centrally and a dry, leathery texture. There was marked crusting and hairs were often embedded in the lesions. The epidermal crusts and underlying skin could be easily detached with minimal pressure. When the skin was removed from the limbs there was subcutaneous edema. Inguinal lymph nodes were enlarged and edematous.

Histologically, an interface dermatitis with hydropic degeneration of basal keratinocytes and multiple, individual apoptotic keratinocytes in the basal and suprabasilar layers of the epidermis was present. The dermal infiltrate was variably cellular and comprised small lymphocytes, plasma cells, neutrophils, macrophages and eosinophils. The dermal infiltrate also occurred around dermal blood vessels and adnexa. There were rare, small clefts/separations at the dermal-epidermal junction. Serocellular crusting was present and microcolonies of coccoid bacteria were present in the surface crusts and scale. The epidermis bordering the ulcerative lesions was hyperplastic, with thin, downward projecting rete pegs. The morphologic diagnosis was an erosive and ulcerative, hyperkeratotic and hyperplastic, cell-poor, interface dermatitis to mixed inflammatory cell, perivascular and periadnexal dermatitis with serocellular crusting and surface bacteria.

Ancillary diagnostics included histochemical stains for fungi, skin culture, microscopic examination of plucked hairs and skin scrapings and real time PCR for porcine circovirus 2 (PCV-2). Histochemical stains did not demonstrate fungal hyphae or spores. *Staphylococcus hyicus* was isolated on bacterial culture- likely a secondary infection. Ectoparasites were not found on microscopic examination of the skin scrapings and plucked hairs. A RT-PCR performed on pooled lung and tonsil was weakly positive for PCV-2. Immunohistochemistry on the sections of skin was not pursued.

![Fig 1](image1.jpg)

![Fig 2](image2.jpg)

The clinical presentation, macroscopic lesions and histologic findings for this sow are most consistent
with porcine ulcerative dermatitis syndrome (PUDS), a chronic, sporadic disease of adult sows with unknown etiology.\textsuperscript{1} Epidermal ulcers with thickened margins can be found nearly all over the body (especially the udder, perineal region and ears), always with sparing of the teats.\textsuperscript{1, 2} During lactation lesions tend to disappear but after weaning they become florid again. Affected sows are sometimes cachetic and lethargic.\textsuperscript{1, 2} A recent study demonstrated the presence of IgG in the skin lesions and a predominance of CD+3 and CD+1 cells suggesting that PUDS is an autoimmune disease.\textsuperscript{3} The clinical signs and macroscopic and microscopic features of the skin lesions in sows with PUDS resemble the vesicular cutaneous form of lupus erythematosus (VCLE), described in Shetland sheepdogs and rough Collies.\textsuperscript{4} Corticosteroids are the drugs of choice for the treatment of autoimmune skin diseases but immunosuppressive therapy in pig herds cannot be justified from an economic point of view. As PUDS is an animal welfare concern, affected pigs should be humanely euthanized.

References:


Equine herpes virus outbreak

By: Dr. Wendy Wilkins, DVM, M.Vet.Sc, Disease Surveillance Veterinarian Livestock Branch

In May of this year, an outbreak the neurological form of equine herpes virus (EHV-1), believed to have originated at a cutting show held in Utah, began to spread across several states and provinces. Two cases were seen in Saskatchewan. The first case was detected on May 30, in a horse that attended the Lloydminster cutting horse show on May 14th and 15th. This horse did not attend the show in Utah; however, several horses which were at the Utah show were also present at the Lloydminster show. This horse recovered uneventfully. The second case was confirmed on June 21. Due to the severity of the symptoms, the horse was euthanized. At the time of writing, no direct links to the Utah or Lloydminster shows were determined.

EHV-1 is common in horses. Symptoms may include fever, coughing and/or nasal discharge. Pregnant mares may abort in late pregnancy, or the foal may be born alive but die within a few days. Neurological symptoms such as incoordination, dog-sitting, dribbling urine or inability to urinate may be seen.

Horse may be infected without showing signs, but still shed the virus in respiratory secretions. Virus is spread by aerosol droplets, direct contact between horses or by contaminated clothing and equipment. Aborted fetuses, fetal membranes and fetal fluids are also infectious and mares who have aborted shed the virus in their respiratory secretions.

The outcome is usually good in cases of respiratory disease; however, when neurological symptoms appear the outcome may be more serious. Death may occur or euthanasia may be required for humane reasons. Neurological signs may take weeks or months to disappear, although in a few cases these have persisted for life.

Horses shed the virus for about a week after becoming ill and will carry the virus for life. They can shed the virus periodically, typically during periods of stress.
Vaccines reduce the frequency and severity of the disease but do not prevent infection. Vaccination is generally recommended for broodmares. No vaccine claims any protection against the neurological form of disease.

Any suspected outbreak of EHV should be taken very seriously. Stop all horse movement on and off the premises and isolated infected and exposed horses immediately to avoid any contact with other horses. Horses should be isolated for 28 days after the last identified case. All facilities and equipment should be thoroughly cleaned and disinfected to prevent further cases.

### Rabies Testing at PDS

**By: Brendan O’Connor, Veterinary Pathologist, PDS: Dale Godson, Veterinary Microbiologist, PDS and Wendy Wilkins, Disease Surveillance Veterinarian, Saskatchewan Ministry of Agriculture**

Rabies is endemic in the wildlife populations in Saskatchewan. In particular, it is assumed that bats, skunks and foxes throughout the province may carry rabies.

As you are aware, the Canadian Food Inspection Agency (CFIA) is responsible for conducting rabies testing of suspect domestic animal cases and suspect wildlife cases where there has been human or domestic animal contact. These tests are carried out in CFIA laboratories.

However, in certain situations individuals may wish to have suspect cases tested which do not meet CFIA’s criteria (e.g. wildlife cases with no known contact with humans or domestic animals). Up until now, Saskatchewan residents did not have access to private testing options.

**PDS is now offering a rabies immunohistochemistry (IHC) assay for cases which do not meet CFIA’s testing criteria.** Veterinary clinics can submit specimens directly to PDS for testing. Suitable samples include the whole brain or the intact head from suspect animals. In the case of very small animals, the whole body may be submitted. Samples should be submitted, chilled or frozen with identification attached, in a leak-proof container as soon as possible after death. A complete history and test request should be attached, in a waterproof envelope or ziplock bag, to the outside of the container. Positive samples will be forwarded to CFIA for confirmation.

The cost of testing is estimated to be $150.00 for small animals and $200.00-250.00 for large animals such as an adult moose etc. This cost will be billed directly to the client requesting the test. **The IHC test for Rabies is not accredited by CFIA but, like all other IHC tests at PDS, it is subject to internal quality assurance.**

To find out if your case meets CFIA testing criteria, please contact your CFIA District Veterinarian first. If it does not meet the CFIA mandate, it can then be submitted to PDS for IHC.

For more information on rabies testing at PDS, please contact Dr. Dale Godson at 306-966-7247 or Dr. Brendan O’Connor at 306-966-7297.

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**Quote:** "If you choose the most likely option and it turns out to be wrong, it was still the right choice. Presented with the same evidence, you should make the same choice again. If you're wrong again, re-evaluate your information."—John M. Cowden.

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