The FVE and the AVMA have collaborated on the development of a joint statement on the roles of the veterinarian in ensuring good animal welfare. The FVE and AVMA recognize that veterinarians have an opportunity and an obligation to help animal owners, caretakers, handlers and policy makers protect and improve animals’ welfare.

“In serving animals and society, veterinarians have unique attributes that make them valuable partners and effective advocates. Among these are:

• Strong science-based knowledge about animal health and husbandry, and proficiency in the technical and practical application of that information;
• Empathy, which encourages veterinarians to ensure uses of animals are necessary and appropriate;
• Direct practitioner access to animals, the environments in which they are housed, and the people who own and care for them;
• Regular interactions with other individuals indirectly responsible for the welfare of animals (e.g., other scientists, policy makers, advocates in the industry and humane communities, the public); and
• Long-standing credibility earned through public service and adherence to high ethical and professional standards.

All veterinarians have an opportunity to provide education and knowledge that can promote welfare-friendly animal care practices. Veterinarians must not only work to implement existing standards, but must also contribute to ensuring continual improvement of those standards.

Veterinarians in different types of practices may have unique roles:

• Private clinical practitioners provide direct-to-owner/caretaker assistance in assessing regularly the welfare of animals and in ensuring good animal welfare.
• Consulting veterinarians may complete in-depth evaluations of facilities and recommend standard operating procedures and best practices.
• Veterinary educators school future generations of veterinarians and paraprofessionals in the scientific and ethical bases behind the development and adoption of appropriate animal care practices.

• Veterinary researchers promote good animal welfare within existing animal care systems and propose alternatives that may better accommodate animal needs. Veterinarians employed in governmental and nongovernmental organizations develop, certify, and enforce animal care standards.

• Veterinarians with species-specific animal welfare expertise can serve as highly qualified, independent evaluators for assurance schemes.

Veterinarians are, and must continually strive to be, the leading advocates for the good welfare of animals in a continually evolving society.”
Gossypiboma (retained surgical sponge) in a Ragdoll cat

By: Moira Kerr, Veterinary Pathologist, PDS

A three year-old, spayed female, ragdoll cat presented to a local practitioner with a history of frequent urination of several days duration. An in-house urinalysis, on a cystocentesis urine sample, confirmed that a urinary tract infection was present. During physical examination a cranial abdominal mass was palpated and was also visualized on plain-film abdominal radiographs. An exploratory laparotomy was performed and a mass was found in the omentum between the spleen and pancreas. The mass was removed and submitted for histological examination. The cat recovered uneventfully from surgery and the urinary tract infection was successfully treated with a course of systemic antibiotics.

A 3.5 x 2.5 x 2.0 cm, brown and tan, firm tissue was received. When transected the mass had a central cavity that contained an almost intact surgical sponge (Figures 1 and 2). Histological examination revealed a central cavity that contained large numbers of refractile, linear fibers. Foci of mineralization were often associated with these fibers. The central cavity was surrounded by a thick layer of fibrous to fibrovascular connective tissue with intermingled macrophages, neutrophils, small lymphocytes and plasma cells. The histological diagnosis was a retained surgical sponge (aka: gossypiboma) and associated granuloma.

In veterinary medicine, only a few cases of retained surgical sponges have been reported in dogs and cats but the true incidence has not been determined.1-5 The incidence may be higher than that reported in human medicine as sponge counting and the use of radiopaque-marked sponges are less systematic in veterinary medicine.

Retained surgical sponges are also known as gossypibomas, from the Latin word gossypium (meaning 'cotton') and the Swahili word boma (meaning 'place of concealment').4 ‘Textiloma’ is another word for a retained surgical sponge. The terms ‘gauzoma’ or ‘gauzeoma’ are sometimes used when speaking about a gauze-induced granuloma. Typically, the sponge incites an aseptic inflammatory reaction and granuloma formation around the foreign material. The interval between the surgery and discovery of the retained sponge varies from days to years. Surgical sponges can remain within the mesentery unassociated with abdominal organs or can be extruded into a hollow viscus, such as the intestine. When the sponge is contained within an aseptic granuloma the mass is often an incidental finding and may be discovered years after surgery with no associated clinical signs. In other cases, secondary infection or a draining tract may develop at the site of the foreign-body granuloma, with associated clinical signs, within days to months, or even years, following the surgery. The diagnosis of a retained surgical sponge can be made with radiography; ultrasonography or more advanced imaging techniques (i.e. MRI or CT) but often the surgical sponge is not discovered until the time of surgical removal.5 FNA aspiration cytology can be helpful. In cytologic samples the presence of refractile, linear fragments of extracellular and intracellular (within macrophages), glassy to granular material lends support to the diagnosis of a retained surgical sponge.5

Malignant transformation at the site of a foreign body granuloma associated with a retained surgical sponge has been reported in dogs and cats. 1, 3 The process of foreign body tumorogenesis or solid-state carcinogenesis depends on a specific sequence of events necessary for preneoplastic maturation. Stimulation of fibrosis and formation of a collagenous capsule around the foreign body appears to be particularly important in the potential for malignant transformation. The development and progression of foreign-body-induced tumors is likely accelerated by foreign-body associated inflammation itself and reactive oxygen species produced by the inflammatory cells. The chemical and physical properties, surface structure, size and shape of the foreign body likely contribute to its carcinogenicity.

There is also a report of a retained surgical sponge in the lower abdomen creating adhesions to the urinary bladder and causing a chronic cystitis adjacent to the gossypiboma.4 The clinical signs and ultrasonography were considered most consistent with an invasive urinary bladder tumor.

Simple precautions are often sufficient to prevent this surgical complication. Preventative measures include: 1) the meticulous counting of sponges; 2) the careful exploration of the body cavity prior to closure and 3) the use of sponges with a radiopaque marker, one by one, held by forceps.4 Also, this potential surgical complication should be include in the differential list when dealing with an intra-abdominal mass or tumor-like or inflammatory lesion of an organ in an animal that has undergone a prior laparotomy.

Transected mass-like lesion showing the surgical sponge within the granuloma
Almost intact surgical sponge removed from the granuloma

References:


**PCR test for *Mycoplasma* sp. at PDS: An Update**

By:Lilian Fernandez (Head technologist, Bacteriology and Mycology Laboratory, PDS) and Anju Tumber (Head technologist, Molecular Diagnostics Laboratory, PDS)

The mycoplasmas are microscopic organisms usually found as free-living saprophytes or as parasites of animals and birds. Both pathogenic and non-pathogenic *Mycoplasma* species are found as commensals on the mucous membranes of the upper respiratory, intestinal and genital tracts, on articular surfaces and in the bovine mammary gland.

These organisms are very fragile, so specimens for culture must be kept refrigerated and delivered to the laboratory within 24 hours of collection. Samples that can be submitted for culture include mucosal scrapings, tracheal exudates, aspirates, pneumonic tissue (usually collected from the edge of the lesion), cavity or joint fluids and mastic milk. Milk itself is considered a good transport medium, but still needs to be kept refrigerated during shipment to the laboratory. The PDS Bacteriology laboratory does provide transport medium to clients for shipment of swabs for culture of certain mycoplasmas, such as, *Mycoplasma bovis*; swabs should be placed into at least 2 ml of the transport medium and sent refrigerated to the laboratory.

Most mycoplasmas are fastidious organisms and require specific growth factors for isolation on culture media. Unfortunately, there is no single mycoplasma medium suitable for the isolation of all *Mycoplasma* spp. found in animals and birds because of their unique nutritional requirements. Following isolation of the organism, further identification is by indirect fluorescence antibody test (IFAT) using *Mycoplasma* species-specific antiserum on the pure culture. This technique uses antiserum produced after multiple subcutaneous, intramuscular and intravenous injections in rabbits with a specific mycoplasma extract. Currently, there is an increasing shortage of mycoplasma-specific antisera, and many laboratories are looking for alternative identification tests to IFA.

At PDS, the Molecular Diagnostics laboratory has a range of species-specific PCR tests for detection of *Mycoplasma bovis* (cattle) *M. gallisepticum* and *M. synoviae* (birds), *M. hyopneumoniae*, *M. hyorhinis* and *M. hyosynoviae* (pigs).

In addition to these mycoplasma tests, we are pleased to announce that we have adapted and validated a PCR test for the detection of mycoplasma organisms using genus-specific primers that allow detection of all mycoplasmas from animals and birds. Further speciation of the organism is done by DNA sequencing.

Please contact the PDS Bacteriology laboratory (306-366-6081) or Molecular Diagnostics laboratory (306-966-7329) for additional information.

**Reminder about Changes to PDS Cytology and Histopathology Services:**

By:Brendan O’Connor, Diagnostics Manager and Veterinary Diagnostic Pathologist, PDS

Effective September 30th, 2011 the following changes in the PDS cytology and Histopathology Services were instituted:

1. Clinical Pathology Laboratory reporting on cytology cases:

The turn-around-time for cytology cases has been changed from "same day" to "24 hours" and the STAT cut-off time has been changed from 5:00 pm to 4:30 pm.

Continued Next Page...
2. Surgical biopsy fees for submissions of “Large tissues” or “Multiple biopsies”, listed in our fee guide as “More than 3 tissues or a single mass > 2 cm in diameter”:

We will cut a maximum of ten slides per case unless you specify on the submission form that you would like the pathologist to cut as many sections as needed, irrespective of the cost. You will be consulted IF additional slides are needed and the charge for each additional slide will be $11.55 per slide (plus GST).

Resignation of Dr. Ed Waters

By: Brendan O’Connor, Diagnostics Manager and Veterinary Diagnostic Pathologist, PDS

Dr. Edwin (Ed) Waters resigned from PDS in early November 2011. Ed has been with PDS since its inception. While experienced in all areas of diagnostic pathology, his primary interest is diseases of livestock, including poultry. His formal education includes a DVM (1974, Ontario Veterinary College, Guelph) as well as a Masters of Veterinary Science (1991, Department of Veterinary Pathology, WCVM, Saskatoon).

Ed’s work experience in veterinary medicine began with eight years as a veterinary practitioner in small and mixed animal practices in London, Ontario and vicinity. This was followed by seven years as a diagnostic pathologist with the Ontario Ministry of Agriculture, Food and Rural Affairs in the Huron Park and Ridgetown diagnostic laboratories. Ed also spent four years with the Department of Veterinary Pathology, at WCVM before being transferred to PDS.

We wish to thank Ed for his service to both PDS and our clients over the thirteen years and trust that you will join us in wishing him well in his future endeavours, both professionally and personally.

PDS Fundraising:

PDS employees raised a grand total of $2,119.25 for “Movember”, through web and anonymous donations; the sale of pen and pencils sets crafted by Brent Wagner and the sale of curry powders, prepared by Anju Tumber and successfully marketed by Kara Toews and Cassandra Herbert.

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Readers’ Feedback

The Animal Health Perspectives editorial team (Dr. Moira Kerr, Crystal Wagner and Kathryn Ross) invite readers’ comment on any material published in the newsletter or questions on material submitted by contributors.

Submit your comments or concerns to Dr. Moira Kerr (email: moira.kerr@pds.usask.ca) and they will be forwarded appropriately.

To be added to the distribution list for the electronic link, email: crystal.wagner@gov.sk.ca

Quote:

"Knowing that we can make a difference in this world is a great motivator. How can we know this and not get involved!" - Author unknown