CASE OF INTEREST
A Case of Ectopic Pregnancy in a Domestic Rabbit.

By Lucy Oldroyd, Veterinary Pathologist.

Information was supplied. The sample submitted was a 2.5 cm diameter mass lying adjacent to the uterus, within the mesometrium and abutting the myometrium. There was a capsule of fibrous tissue surrounding mottled brown, firm to pasty material with mineralised foci. Distinct anatomic structures were not identified and it was not recognisable as a foetus. There was no haemorrhage or inflammation evident in the surrounding loose fibrous tissue and fat.

Histologic examination revealed a dense fibrous capsule in which there were a few macrophages containing mineral. Inside the capsule was a layer of necrotic tissue then a cystic space. Within this was a necrotic mass showing an outer surface covered by a layer containing regularly placed hair follicles resembling normal hairy skin. One area showed developing teeth within an upper and lower jaw in which there was a structure suggesting the tongue (Fig 2). Two long bones showed well-developed diaphyses and epiphyseal areas (Fig 3). Regularly spaced foci of mineralisation suggested vertebrae (Fig 4). Other tissues showed advanced autolysis but no inflammation. The uterus showed no evidence of inflammation and appeared normally developed. No inflammation was present in the mesometrium. On the basis of the well-ordered anatomic structure of the mass a diagnosis of ectopic pregnancy was made.

Figure 1. Photomicrograph showing developing teeth within an upper and lower jaw. HE Stain.

Figure 2. Photomicrograph of structures suggesting the tongue and a tooth. HE Stain.

Figure 3. Photomicrograph of two long bones showed well-developed diaphyses and epiphyseal areas. HE Stain.

Figure 4. Photomicrograph of regularly spaced foci of mineralisation suggested vertebrae. HE Stain.

Ectopic pregnancy may be a consequence of escape of a fertilized ovum into the abdominal cavity (primary) or rupture of the pregnant uterus (secondary) and has been reported in many species but is considered rare (Corpa 2006). In the rabbit, however it has been described as relatively common (Harcourt-Brown 2002). And Segura Gila et al (2004) describing 28 cases of ectopic pregnancy in 550 post mortems of farmed New Zealand White does concluded it to be not ‘such an unusual finding in rabbits’.

No clinical history is available for the individual described here. Segura Gila et al report that of their 28 cases all but 3 were in apparently good health. Eight of these had palpable abdominal masses that did not elicit discomfort on palpation. Beddow (1999) also describes a case in an 11-month-old Netherland Dwarf doe, in good

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JOURNAL Articles (with links)


Ciclosporin is an immunosuppressive drug that has been used to treat allergies and other immune-mediated diseases in cats, dogs and humans. Information about the adverse effects of ciclosporin in cats has been limited to smaller studies and case reports. Adverse effects in dogs are mainly gastrointestinal in nature, but humans can also experience hypertension and altered renal function. The aim of this retrospective case series study was to document the occurrence and clinical appearance of adverse events in cats receiving ciclosporin to treat allergic skin disease. The medical records of 50 cats with allergic dermatitis treated with oral ciclosporin (1.9-7.3 mg/kg/day) were reviewed. Adverse events occurred in 66% (33 cats). Adverse events likely to be associated with ciclosporin included the following: vomiting or diarrhoea within 1-8 weeks of receiving ciclosporin (24%), weight loss (16%), anorexia and subsequent hepatic lipidosis (2%) and gingival hyperplasia (2%). Other adverse events less likely to be associated with ciclosporin therapy included the following: weight gain (14%), dental tartar and gingivitis (10%), otitis (4%), chronic diarrhoea (4%), inflammatory bowel disease with indolent gastrointestinal lymphoma (2%), urinary tract infection (2%), cataract (2%), elevated liver enzymes (2%), hyperthyroidism and renal failure (2%) and transient urination (2%). Some cats experienced multiple adverse events. Case-control studies are needed to prove cause and effect of ciclosporin in regard to these adverse events.


A study To evaluate and compare the outcomes of dogs with periarticular histiocytic sarcoma (PAHS) and histiocytic sarcoma of other anatomic locations (non-PAHS) and identify factors associated with outcome for dogs with PAHS was performed. Retrospective cohort study. 19 dogs with PAHS and 31 dogs with non-PAHS. Medical records of dogs with histiocytic sarcoma that underwent definitive local treatment (surgery or radiation), chemotherapy, or a combination of these were reviewed. Patient signalment, clinical signs, staging test

http://www.abbeyvetservices.co.uk/newsletters/dec11.htm
ovariohysterectomy and the dissection of six mummified foetuses free of adherent bowel. It would appear that ectopic pregnancy in the rabbit might not be associated with clinical illness. For the farmed rabbits described by Segura Gila et al it is possible that transient clinical illness may not have been observed, particularly as many of these individuals had secondary ectopic pregnancy with signs of uterine rupture. One case possibly associated with a fatal outcome is that described by Arvidsson (1998) where the uterus was found to be ruptured and three mummified foetuses were discovered free in the abdomen at post mortem. This doe had given birth to three offspring three weeks previously. In this case the uterus was considered to have ruptured recently.

For a primary ectopic pregnancy placentation must develop on a peritoneal or omental surface. The invasiveness of placentation and the development of endometrial tissue are considered to be the permissive factors allowing ectopic pregnancy to develop in people. Rabbits have a similar placentation to people with foetal survival occurring until it becomes inadequate (Segura Gila et al 2004). This may explain the presence of term-sized foetuses in apparent primary ectopic pregnancy in this species, whereas in other species the placentation often does not permit foetal development to such an extent. (Segura Gila et al, 2004). For a secondary abdominal pregnancy there are three possibilities. The foetus may escape into the abdomen but retain placentation attachment, the foetus escapes and there is reimplantation of the placenta within the abdomen, or the foetus may escape with loss of placental support and consequently dies (Corpa, 2006). It may not be possible to clearly distinguish primary from secondary ectopic pregnancy. Placental attachment may degenerate once the foetus dies. The myometrium may regenerate without the formation of scar tissue so that rupture may not be identifiable (Corpa, 2006).

In conclusion an ectopic foetus in the rabbit may be an incidental finding. Its presence may or may not be associated with clinical signs and it may or may not be associated with uterine pathology. An ectopic pregnancy may remain undetected for quite some time.

References:

LATEST NEWS

Recent advances in the treatment and control and methicillin-resistant staphylococci - Webinar.

J Scott Weese DVM DVSc DipACVIM

Further, while MRSA often attracts the most attention, methicillin-resistant S. pseudintermedius (MRSP) has emerged at an astounding rate and is now a very important animal health risk. This multidrug resistant bacterium has increased dramatically internationally, particularly as a cause of skin, ear and surgical site infections.

To view his very informative Webinar you need to be a member of TheWebinarVet*

*If you’re not a member you can Sign up to get your 30 days free CPO (bronze membership) and watch the free archived webinars including Tim Nuttall’s MRSA webinar on the same theme.

SIDE STORY

Proposal of a 2-Tier Histologic Grading System for Canine Cutaneous Mast Cell Tumors to More Accurately Predict Biological Behavior (Excerpt from a Vet Pathology Article)

Currently, prognostic and therapeutic determinations for canine cutaneous mast cell tumors (MCTs) are primarily based on histologic grade. However, the use of different grading systems by veterinary pathologists and institutional modifications make the prognostic value of histologic grading highly variable.

To evaluate the consistency of microscopic grading among veterinary pathologists and the prognostic significance of the Patnaik grading system, 95 cutaneous MCTs from 95 dogs were graded in a blinded study by 28 veterinary pathologists from 16 institutions. Concordance among veterinary pathologists was 75% for the diagnosis of grade 3 MCTs and less than 64% for the diagnosis of grade 1 and 2 MCTs.

To improve concordance among pathologists and to provide better prognostic significance, a 2-tier histologic grading system was devised. The diagnosis of high-grade MCTs is based on the presence of any one of the following criteria: at least 7 mitotic figures in 10 high-power fields (hpf); at least 3 multinucleated (3 or more nuclei) cells in 10 hpf; at least 3 bizarre nuclei in 10 hpf; karyomegaly (ie, nuclear diameters of at least 10% of neoplastic cells vary by at least two-fold); fields with the highest mitotic activity or with the highest degree of anisokaryosis were selected to assess the different parameters.

According to the novel grading system, high-grade MCTs were significantly associated with shorter time to metastasis or new tumor development, and with shorter survival time. The median survival time was less than 4 months for high-grade MCTs but more than 2 years for low-grade MCTs.

Perhaps if this becomes more widely used light microscopic MCT grading may be more accurate? The Current Patnaik / modified systems are quite old and possibly do need reviewing and there can be many variations in tumour cells but not all sit happily in the 3 grades currently given. Watch this space!

http://vet.sagepub.com/content/48/11/147.short

CYTOTOLOGY TIPS

Quick Fluid Cytology Tips

- Make a smear at the time of harvest (cell preservation)
- Some in EDTA and some in plain (+-) formalin if delay
- EDTA will cause cell swelling artefact
- EDTA will help to prevent clotting and bacterial overgrowth
- EDTA will not prevent post-sampling autolysis
- Culture cannot be performed on EDTA samples
- Necrosis = no diagnosis

results, clinicopathologic data, type of treatment, response, and outcome were collected, and potential risk factors in dogs with PAHS were identified and analyzed for an association with outcome. Dogs with PAHS lived significantly longer than did dogs with non-PAHS, with an overall median survival times of 391 (range, 48 to 980) and 128 (range, 14 to 918) days, respectively, despite the presence of suspected metastasis at diagnosis in 13 of 19 dogs with PAHS. Dogs with PAHS without evidence of metastasis at diagnosis lived significantly longer than did dogs with PAHS with evidence of metastasis, with median survival times of 980 (range, 83 to 980) and 253 (range, 48 to 441) days, respectively.

Administration of prednisone in dogs with PAHS was associated with a significantly shorter time to tumor progression (TTP) and increased risk of tumor progression and death. Results indicated that dogs with PAHS may have a favorable outcome independent of metastatic status when treated with chemotherapy or aggressive multimodal treatment. The concurrent administration of prednisone may be a negative predictive factor for survival time and TTP in dogs with PAHS.

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