

Study Background

Ectopic ureters (also called 'wet puppy syndrome') is known to be a hereditary problem in Golden retrievers; however the mechanism for this inheritance is not yet known.

In Entlebucher Mountain dogs, ultrasound screening of healthy dogs has identified 3 ureteric subtypes (A, B & C), with 'A' being normal, 'C' being ectopic and 'B' intermediate. Pre-mating screening in this breed has achieved a reduction of the incidence of wet puppies from 26% to 10% over 3-4 years.

We would like to assess this ultrasound screening technique in the Golden retriever to see if three subtypes are also present in this breed and to see if there are clinically normal dogs present within the breed with type C ureters (ectopic). This is more likely to be the case in male dogs due to their much longer urethra and consequently much higher urethral resistance. This could shed light on how the condition is being transmitted in Golden retrievers and could provide a strategy to reduce its incidence.

As part of this project we would also like to collect cheek swabs from all dogs with type 'A' ureters (normal) for the DNA bank at the Animal Health Trust. This will allow us to have a true control group to compare against the DNA samples already collected from affected dogs.

How you can help

We are looking for healthy, urinary continent, male and female Golden retrievers to take part in an ultrasound screening project to look at the position of the ureters as they enter the bladder. We would also like to take cheek swabs from dogs confirmed to have normal ureters for DNA testing. The screening will take place at the Queen's Veterinary School Hospital in Cambridge. To find out when our next screening dates are please contact us:

Laura Owen

(RCVS & European Specialist in Small Animal Surgery)

Email: lo247@cam.ac.uk

Amy Stelman (Clinical Research Nurse)

Email: as2175@cam.ac.uk

Queen's Veterinary School Hospital

Maddingley Road, Cambridge CB3 0ES

Phone number: 01223 337621

Email: hospital@vet.cam.ac.uk



Thank you very much in anticipation!

Golden Retriever Ectopic Ureter Ultrasound Screening Project

Queen's Veterinary School Hospital
Department of Veterinary Medicine
University of Cambridge



Golden Retriever Ectopic Ureter Research

Laura Owen RCVS & European Specialist in Small Animal Surgery

Professor Mike Herrtage RCVS & European Specialist in Small Animal Medicine and Imaging

Amy Stelman Clinical Research Nurse

Cathryn Mellersh Head of Canine Genetics at the Animal Health Trust



UNIVERSITY OF
CAMBRIDGE



THE QUEENS
VETERINARY
SCHOOL HOSPITAL

What does the study involve?

1. Free veterinary examination

- A clinical examination will be carried out on all dogs to ensure that they are healthy and eligible for inclusion into the study.

2. Ultrasound screening Test

- A small patch of hair will need to be clipped from your dogs belly between their back legs. This should not be visible when standing.
- A Doppler ultrasound of the bladder will be carried out by Professor Herrtage.
- The ureteric openings will be identified and the distance from the ureter to the bladder neck (in females) and/or prostate (in males) will be recorded.
- In some dogs a diuretic may need to be administered by mouth to increase the visibility of the ureteric openings.
- Any dog unexpectedly diagnosed with ectopic ureter(s) will be offered a full urinary tract ultrasound free of charge and will be given appropriate treatment advice.



Ureteric jet visible with Doppler Ultrasound

3. DNA sample collection

- Two buccal swabs are taken from inside the mouth (cheek)



Significance of the study

The ultimate aim of this project is to determine whether an ultrasound screening (or DNA) test can be used to reduce the number of wet puppies and thus improve the health and welfare of the Golden retriever.

