



## *Haematuria (blood in the urine) Fact Sheet*

### Information about urinary tract infections in dogs and cats

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#### **What is haematuria?**

Haematuria is the medical term used to describe blood in the urine that occurs due to bleeding in the urinary system. When this happens the urine typically looks red and, occasionally, blood clots are seen. Sometimes bleeding can be on a microscopic level and the urine may appear normal. In these cases, blood may only be detected by laboratory analysis.

#### **Are there other clinical signs that can be associated with haematuria?**

Other clinical signs that may be present would include straining to urinate and squatting frequently to pass small amounts of urine. Straining to defecate can sometimes occur in male dogs with an enlarged prostate.

#### **What can cause blood in the urine?**

This can vary with the location of the bleeding. Typically the causes of urinary tract bleeding are separated into either upper urinary tract or lower urinary tract groups. The upper urinary tract includes the kidneys and ureters (the tubes that connect the kidney to the bladder). The lower urinary tract includes the bladder, urethra, prostate (in the male) and vagina (in the female).

#### **Causes – Lower urinary tract bleeding**

In cases where the lower urinary tract is involved other clinical signs typical of cystitis are normally seen.

**Bladder** – inflammation of the bladder wall (cystitis) and subsequent bleeding can occur due to uroliths (bladder stones), polyps (benign growths), infections and occasionally tumours. In the cat, there is a relatively common form of cystitis that without infection (called sterile inflammatory disease) called feline lower urinary tract disease (FLUTD). FLUTD has been linked to stress and anxiety.

**Prostate** – the most common causes of bleeding from the prostate in an unneutered dog are prostatitis (infection) and benign hyperplasia. Benign hyperplasia is an enlargement of the prostate as a consequence of testosterone stimulation. In a neutered dog cancer of the prostate must be considered.

**Vagina/Urethra** – infections, sterile inflammations and polyps (benign lumps in the vaginal) can cause blood in the urine.

### **Causes – Upper urinary tract bleeding**

Usually in the case of upper urinary tract bleeding there are no signs of discomfort when urinating.

Kidney – infections, nephroliths (stones) and occasionally tumours (benign and malignant) can cause bleeding from the kidney. We occasionally see dogs which have bleeding from a kidney, but no cause of the bleed can be identified. This is called idiopathic renal haemorrhage.

### **What tests may be required if my dog or cat has haematuria?**

This will largely be determined during the consultation, during which the clinician will try and localise the most likely origin of the bleed. In most referred cases the first tests normally performed would be an ultrasound scan and a urinalysis. Urinalysis is performed to look for evidence of a urinary infection and the ultrasound is performed to look for structural changes in the urinary tract.

Other tests that may be recommended include contrast radiographs or cystoscopy, both of which require general anaesthesia. Cystoscopy involves passing a camera down the urethra into the bladder. This enables the clinician to evaluate the bladder wall more thoroughly and biopsies can be taken. Contrast radiography uses agents that enhance the appearance of the urinary tract on radiographs. The common contrast techniques are intravenous urethrography (IVU) and retrograde contrast urethrography (RCU). In an IVU the contrast agent is injected into a vein and filtered by the kidneys. In a RCU the agent is flushed down the urethra into the bladder.

### **Will my pet need any radiographs if ultrasound has been performed?**

This will largely depend on the findings of the ultrasound. In some cases the sum of information gleaned from both procedures can greatly enhance our understanding of the case.

### **What is cystocentesis and why does my pet need the procedure?**

Cystocentesis is a technique used to obtain a sterile urine sample from the bladder. Collecting a sample 'free catch' when the patient urinates can result in bacterial contamination e.g. from the animal's coat. This can lead to a misleading culture result. Cystocentesis is a benign procedure that involves inserting a needle (usually guided by ultrasound) through the abdominal wall into the bladder. Cystocentesis is a very well tolerated technique and in most patients can be performed with sedation.

For more information, speak to your Specialist or contact our Client Care team.

***If you are concerned about the health of your pet you should contact your veterinary surgeon.***