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Tortoiseshell
Cat Society**
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Polycystic Kidney Disease (PKD)

Introduction

Feline Polycystic kidney disease (PKD) is an inherited kidney disease found in cats. There is evidence that Persian and Exotic cats may be more affected than most. PKD has been reported sporadically since 1967 but studies were not conducted until 1990. Most of the work in the USA was conducted by D Biller, S DiBartola and W Lagerwerf.

What is PKD?

PKD is a disease that shows up at any time in life and can cause enlarged kidneys and kidney dysfunction occurring between three and 10 years of age. The disease is inherited and cysts are present from birth but may be very small on young animals. Cysts can vary in size from below 1mm to 10mm. The number of cysts varies and one or both kidneys may be affected. Problems occur when the cysts grow and reduce the kidney's ability to function properly. Failure may be the ultimate result.

Diagnosis

Ultrasound is a simple technology to detect the cysts on the kidney. This is a non-invasive technique and providing the equipment is adequate, ensures a high success rate in identifying the condition. Biller et al, indicate that ultrasound diagnosis is 98% accurate after approximately 10 months of age. The Feline Advisory Bureau in the U.K., is currently supporting a programme to record and document the incidence of this disease. One of the participating organisations with superb imaging equipment and staff is the Animal Health Trust at Kentford near Newmarket. Generally cats do not require sedation and many ultrasound operators do not clip the coat.

Ultrasound scan of a normal kidney



Normal kidney



Ultrascan of a kidney showing a cyst

DNA test has now been developed by the University of California in Davis.

How are cats effected?

PKD is NOT contagious. Studies indicate that it is an autosomal dominant inherited disease. As such the disease will show if one gene is present. This can be derived from either the mother or father or both parents. Thus if one parent shows the disease and the other does not, there is 50% probability that the progeny will carry the gene and thus show the disease. It should be noted that where as a cat can be identified as positive, it may not be possible to guarantee a cat is negative! It can really only be said that cysts were not detected as they may develop later in life. However it is somewhat comforting that AHT claim scanning for signs of cysts is one of simpler detection procedures that they deal with. Cysts if present can usually be detected fairly rapidly. The word negative is one commonly used and should be viewed with some caution. Clearly the confidence increases if several generations of cats have indicated that they appear to be clear of cysts.

What is the treatment?

There is no treatment for this disease. However recognise that the cat live a long and happy life and the effects of PKD may not effect the cats lifestyle. But clearly PKD does effect some and may shorten life.

Can PKD be eliminated?

As PKD is the result of an autosomal dominant gene, the disease may be eliminated. The quickest way to eliminate the presence of the disease is to neuter and spay all individuals that are indicated to have the disease. Then if breeding programmes only use cats that have been scanned and cysts not indicated, the problem should go away. However when the gene pool is small or breeding cats have especially valuable qualities, they could be used as some of the progeny will not inherit the disease but some might. It is a personal decision whether this is ethical or worthwhile.

Conclusion

MOST IMPORTANT - It is nobody's fault. This disease has been around to at least 30 years. It is now understood a little better. Cats are dying in vast numbers as young ages due to this disease. But it can be eliminated by careful investigation and selection and the cat world must be a better place - wouldn't it?

ALWAYS seek the advise of your veterinarian