AWF research summary

Pain Management for cats: Study by Dr Polly Taylor, Feline Advisory Bureau (FAB)

Research period 2004

Grant £16,425

Domestic cats are one of the most common domestic pets but, as a result of their unique behavioural and physiological makeup, they have been somewhat neglected in development of appropriate techniques for managing pain. A number of studies in feline analgesia, in both laboratory and clinical settings, have now addressed this deficiency and this has led to considerable improvement in clinical pain management in the cat, in particular through better understanding of the use of opiates (morphine-like drugs) in this species.

The other major group of analgesic drugs, the non-steroidal anti-inflammatory drugs or NSAIDs (aspirin-like drugs), also have a role to play in feline analgesia. These have proved more difficult to study in a controlled manner and both clinical and laboratory studies are necessary to characterise any analgesic in order to develop optimum dosing schedules.

This study funded by the AWF has enabled the development of a humane system for laboratory testing of NSAIDs in cats. It involved a pressure-testing device for feline analgesia studies so that NSAID treatment protocols could be developed specifically for use in the cat, in the way that the thermal testing has been used for opiates.

Prior to the 1990s cats were often regarded as “little dogs” and few efforts were made to alleviate feline pain specifically. In the following decades this completely changed and cats now receive the attention they deserve. Funding from the AWF, in conjunction with the Feline Advisory Bureau (now International Cat Care), enabled the development of cat-specific analgesiometry and pharmacokinetics. This in turn has led to the development of cat-specific analgesics and appropriate dosing protocols.

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There is clear evidence that this has been achieved by the ever increasing number of approved analgesics in cats, the number of CPD events on cat pain management, and the routine incorporation of intrinsic analgesia in the anaesthetic protocols now used for surgery in general practice.

As a result of this study there is now a much more effective pain management routine for surgery on cats being carried out in general veterinary practice.

Findings
The first part of the investigation successfully developed a device for the application of a pressure stimulus. This was tested and validated using a group of well-handled laboratory cats who cooperated willingly with the daily activity.

The process was then developed further using a technique of producing a small focus of local inflammation in the skin which would respond to NSAID treatment. Carprofen, the first NSAID to be tested in this system, and to some extent buprenorphine (an opiate-type drug), prevented inflammatory hyperalgesia (increase in pain from the inflammation), showing the method to be an
effective and humane means of laboratory testing of NSAID analgesia in cats. The technique is undoubtedly more acceptable than older methods which employed much more invasive methods of producing inflammation.

**Full peer reviewed papers published from this project:**


Image caption

"Support from the AWF has made substantial contribution, often in conjunction with the Feline Advisory Bureau (now International Cat Care), to the development of cat-friendly nociceptive threshold testing equipment used in research into pain relief. These devices are now used world-wide and have enabled considerable progress in research into and licensing of analgesics for cats."