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Pain Therapy for Piglets

Torunn Krangnes Fosse's doctoral thesis shows that piglets of different age groups have a unique ability to break down and excrete painkillers. She also demonstrates that the painkilling and anti-inflammatory effect of the medicines studied work to varying degrees on piglets. The results of her research will be important for the choice of medicine and dosage used in the treatment of pain in piglets.

Every year, 98 million male pigs are castrated in Europe and this surgery is usually carried out before the pigs are 14 days old. Castration is proven to be painful for these animals, not just during the course of the surgery itself, but also for several hours or days afterwards. It is the treatment of this post-operative pain that Fosse has focused on in her thesis. In addition, piglets often experience pain in connection with conditions such as inflamed joints or traumatic injuries.

Fosse has studied the pharmacology of the two painkillers meloxicam and ketoprofen in piglets. She found that the piglets had a better ability to excrete ketoprofen when they were six days old than when they were three weeks old. This may mean that different dosages should be used, according to the age of the pigs being treated.

By means of an inflammatory model, Fosse showed that piglets treated with ketoprofen experienced significantly

less pain when pressure was applied to the inflamed area than pigs receiving no treatment. The painkilling effect was evident for up to 24 hours after the treatment had been given. Meloxicam achieved only a low degree of painkilling effect in this model. Using another model, this medicine was also shown to have a low ability to prevent the production of inflammatory mediators in tissue.

The results of this doctorate can make a big difference to the choice of medicine and dosage to be used in the pain therapy of piglets up to a month old.

Veterinary surgeon Torunn Krangnes Fosse presented her doctoral thesis on 24th September 2010 at The Norwegian School of Veterinary Science. The thesis is entitled: "Pharmacology of meloxicam and ketoprofen in piglets."

Source: The above story is reprinted from materials provided by Norwegian School of Veterinary Science.