

A COMPARISON OF THE HUMANENESS AND LARGE-SCALE APPLICATION POTENTIAL OF TWO VISUAL IDENTIFICATION METHODS FOR STRAY DOGS

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The ability to visually identify stray and feral animals that have undergone surgical or non-surgical sterilization is critical to avoid their recapture, which results in wasted time, additional stress to the animal, and the potential for re-treatment. Ear-tagging and ear-whiting (freeze branding) are promising identification procedures. Our goal was to scientifically evaluate these two methods to determine which is more humane, less stressful/painful for the animals, and easy to be performed on a large scale.

Thirty mixed-breed dogs were used. Measurements of heart rate, respiratory rate, pupil enlargement, and body temperature were taken at baseline. On day 1, dogs were sedated (diazepam 0.2mg/kg bw), shaved and divided randomly into three equal groups (n=10): control group (C) dogs were handled; T group dogs underwent ear-tagging. Two piece swivel-tags were used on males (sub-group Ts) and round roto-tags on females (sub-group Tr) and W group dogs underwent ear-whiting. Ear-whiting was completed on the ears by an iron cooled in liquid nitrogen.

Many signs of stress (defecation, urination, pupil enlargement, tachycardia, etc.) were noticed in all groups during baseline handling. At day 1, similar signs of stress were noticed again during handling in all the dogs, which peaked when they heard the sound of the hair trimmer. Many sign of discomfort were noticed at this point: pupil enlargement, rapid heart rate (>160 bpm), scratching the ground with their nails, defecation, urination, and attempting to escape. Strong restraint of the dogs was required to shave the ear. Tag application took a few seconds to complete in group T. Some dogs (20%) reacted with vocalization, others with abdominal muscles contraction (30%), and many (50%) didn't react at all. For group W, restraining the dogs at lateral recumbency when applying the freeze brand was difficult. No discomfort was observed when the freeze brand iron was applied.

No inflammatory reactions were noticed in the subsequent 3 days in any groups. Video monitoring indicated that dogs in sub-group Tr scratched ears using their back legs, shook their head, and rubbed their head against the wall several times during the 30 min taping. No behavioral side effects were seen in group W and sub-group Ts.

From days 3 to 10, a small volume of exudate from the ear was noticed in group T; this was more prevalent in long-haired dogs and those with the roto-tag. Small skin lesions occurred in 6 dogs of group T due to the tag rubbing on skin or the cartilage ridges of the ear. No medical side effects were noticed on group W. However, we found the process of ear-whiting to be complex (e.g., required much more time and experience) and therefore impractical. Our experience with these small sample sizes indicated little difference in terms of stress in comparing the ear tag or ear-whiting. There appear to be functional differences between the roto-tag and swivel tag, warranting further investigation.