

TECHNICAL NOTE

The Restraint Platform - refinement of long term restraining of dogs for experimental procedures

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Summary

All experimental procedures should be evaluated and, if possible, altered to reduce discomfort, pain and/or distress and to enhance the involved animal's well-being.

This short communication describes a new method for the long term restraining of dogs for experimental procedures like multiple blood sampling.

The newly developed platform offers the dog a choice either to lie down, sit upright, or stand up, and facilitates an easy blood sampling procedure while ensuring a good and safe restraining of the dog.

Sammendrag

Alle brugte eksperimentelle procedurer bør evalueres og om muligt forandres for at reducere ubehag, smerte og/eller lidelse samt for om muligt at forøge involverede dyrs velbefindende.

I denne korte artikel beskrives en ny metode til langtidfiksering af hunde i forbindelse med eksperimentelle procedurer såsom gentagne blodprøvetagninger.

Den nyudviklede fikseringsplatform gør det muligt for hunden selv at vælge, om den vil ligge ned, sidde eller stå op og muliggør samtidig en nem blodprøvetagning samt en god fiksering af hunden.

Introduction

The Three R's principles – reduction, refinement and replacement – should always be emphasized and complied with to ensure the use of a minimum number of animals, the highest well-being of involved animals, and the use of alternative in-vitro methods (*Russell & Burch, 1959*).

Traditionally, the most commonly used method for the long term restraint of dogs is a harness like the one introduced by Pavlov almost a century ago (*Pavlov, 1927*). The Pavlov harness is made of textile with held holes for the legs to enable an easy blood sampling procedure from all four legs. The dogs are held in a standing position that impedes their natural sitting or laying down resting position (Figure 1).

This short communication describes a new method for long term fixation of dogs for experimental procedures that offers the dog a choice to either to lie down, sit upright, or stand up, and facilitates an easy blood sampling procedure and ensures a good and safe restraining of the dog.

Materials and Methods

The newly developed platform uses the same height - adjustable stand as the traditional harness. The textile and metal wires are replaced by two wings made of metal netting to ensure that the dogs do not fall off the platform when making sideways movements. The adjustable wings can be locked in an open position to secure the dog sufficiently while allowing hind leg blood samples, or urine samples, to be taken during the experimental restraining period.

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Figure 1: The traditional harness used for restraining dogs during experimental procedures.



Figure 2: The newly developed platform.

The dog is restrained by wearing a normal dog walking harness that is attached to the rear and front of the platform with two snaphook leashes - one going from the rear of the platform to be attached to the harness at the back region of the dog and one going from the front of the platform to be attached to the harness at the chest region of the dog. This keeps the dog from moving backwards or forwards, or from falling off the platform, but still allows the dog a choice to either to lie down, sit upright, or stand up during the experiment (Figure 2).

If a catheter is to be placed in one or both front legs, a special homemade sheath made of thick textile prevents the catheter from being removed by the dog. The sheath is made with a zipper to enable easy and quick blood sampling and is held in place on top of the catheter with velcro-tape that goes around the neck of the dog.

Results

All traditional harnesses are now being replaced here by the new restraint platform and after minor training both old and newly-arrived dogs become accustomed to it. Most of the dogs are easily trained on the new method, but a few required some more training in order not to bite the sheath or the leash going from the front of the platform to the chest region of the dog. In some dogs, the blood sampling

procedure requires two persons - one to hold on to the dog and one to sample the blood, as the dogs are able to move more freely, but for calm and experienced dogs, the procedure still requires only one person. All dogs are observed throughout the whole experimental period and there have been no major problems using the new platform.

Conclusion

After minor training, all well socialized dogs can be restraint for several hours in a trustful and calm manner by using the new platform. It appears to be much more comfortable to the dogs than the traditional harness and gives the dogs a choice between various resting positions. The platform is easy to handle and necessary experimental procedures are easy to perform by the personnel involved, giving a more pleasant environment to both dogs and personnel.

References

- Russell W & Burch R*: Principles of Humane Experimental Techniques, UFAW Special Edition 1992, Publrs UFAW, 1959.
- Pavlov I*: Conditioned Reflexes: An Investigation of the Physiological Activity of the Cerebral Cortex, 1927.