

Shock collars used as correction of behaviour in dogs.

Essay by Carina Kraft Thomassen

In the canine business, running from dogs kept as family pets to highly specialized working dogs, training methods are frequently discussed. One of the methods causing a consistent debate is the use of shock collars. A shock collar is an electric receiver attached to the animals' neck by a firm collar. The owner/trainer holds a transmitter, which can be used to deliver electric shocks to the animal. The time and power of the shock may vary and can be programmed by the user. Both these elements are affected by humidity and condition of the coat and can therefore not be completely controlled. There are several products on the market with different features, ranging from warning beep sounds, to ability to increase/decrease the shock-power-time function, however, most products works as simple shock deliverers. The method is used mainly on working dogs, such as police dogs and guard dogs, but is also used in dog sport and private obedience training. The question engaging a lot of people is whether the shock collar causes stress and prolonged impact on the dog, or if it serves its purpose of being a fast, timesaving correction, used as communication between the owner/trainer and the animal.

A research done by Matthijs B.H Schilder and Joanne A.M van der Borg, (Training dogs with help of the shock collar: short and long term behavioural effects, Applied Animal Behaviour Science 85 (2004) 319-334), investigates whether the use of shock collar causes a prolonged impact on dogs behaviour.

During the research period 31 dogs were divided into two groups, one containing 16 dogs (2 females, 14 males), the other containing 15dogs, (3 females, 12 males). All dogs used were adult German shepherds, normally trained as guard dogs. The first group, called the S-Dogs, was trained by the use of shock collars, the second group, the C-dogs were trained similarly, and rough, but without electric impulses.

The use of shock collar took place on a specific training ground only. During practice the trainers were asked to perform three main tasks: a free walk on the leash, obedience work (sit and down in motion, heeling in different pace and direction changes, recall etc) and protection work. The use of shocks were not limited, but used after the trainers' preferences. The number of shocks was recorded after each session. To be able to observe the possibility of change in behaviour after receiving electric shocks, the dogs were also walked in the park, accompanied by the same trainer that handled them on the training course. During the walk the trainer asked the dog to perform the same exercises as done earlier on the training ground. All events were recorded on videotape.

The results of S-dogs and C-dogs were analysed and compared in an elaborate way, using only recordings in which a sufficient amount of dogs, over 50%, could be compared. The comparison was based on body, ear, tail and stress related behaviour.

Focus was also put on the animals immediate response to the electric shock in terms of fear, pain, pain induced aggression, avoidance and submission. For this experiment 15 trained police service dogs, of different breeds, were used. During the experiment shocks were delivered.

The disobedience, frequently leading to the correction in form of an electric shock, was neglecting the "let go" command, heeling in front of the trainer or biting the criminal at the wrong moment. Observation of the animal directly after a shock delivery, showed lowering of ear position, tongue flicking, yelping etc. The reactions were put together in a table showing frequency and number of dogs in which the behaviour occurred. In most cases the reaction

upon the electric shock faded quickly, the reason for this was said to possibly be the application of a new command in close connection to the shock.

Evaluation of the first experiment on behaviour of S-dogs and C-dogs showed, that during free walking on the training ground, S-dogs had lower ear position than C-dogs but tail position remained unchanged. Concerning stress related behaviours, S-dogs showed remarkably more consistent licking of lips than C-dogs. The other stress related symptoms were too rare to be compared. During obedience training the same results in body position occurred, the stress related behaviours differed as the licking of lips, yawning and turning away from the trainer appeared similarly in both groups. However, stress behaviour such as tongue flicking and lifting of front paw was more common in the S-dogs.

Viewing the protection work they found that the ear position of shocked dogs was lower, but the tail position was the same in both groups, S-dogs also lifted their paw more often than the C-dogs. The most significant difference of this area was the S-dogs tendency to walk with completely flexed limbs.

Regarding the S-dogs and the C-dogs behaviour in a park they could establish that while walking on a leash, S-dogs showed a lower ear position but once again the same tail position as the C-dogs. Same behaviour occurred during obedience training in the park. Added to the latter was the stress symptom tongue flicking that was shown more often in the S-dogs. Yawning, lifting of front leg and lip licking was shown equally in the two groups.

When summing up these conditions, they could see that the C-dogs did not show a difference in body position connected to the training course, only tongue flicking occurred more often on the training course than in the park. The exact same comparison was made on the S-dogs but this showed a lower tail position when working on the training course. Even licking of lips and lifting of the front paw occurred more often on the course.

All these results clearly show that the use of an electric collar triggers stress symptoms in the animals. This observation lead to the question whether training in general, with or without shock appliance, is more stressful than being walked? Both groups showed lower ear and tail position during obedience and protection work than during free walking, apart from the tail position being similar during the protection work and the free walk. This implying that any harsh training situation causes stress to bigger or lesser extent.

Another research preformed by E. Schalke, J. Stichnoth, S. Ott , and R. Jones-Baade (Clinical signs caused by the use of electric training collars on dogs in everyday life situations, *Applied Animal Behaviour Science* 105 (2007) 369-380) measures the heart rate and salivary cortisol level as a stress indicator in dogs shocked by an electric collar. These two parameters indicates the activity of the sympathetic nervous system and the hypothalamic pituitary adrenal axis, both tightly connected to stress.

The research was done on 25 laboratory-bred beagles in order to investigate the stress arising from the use of electric collars. The dogs were 1,5-2 years old, five females and nine males. All dogs were equipped with a collar with a receiver or a dummy receiver attached to it. The dogs were then divided into three groups; Group A, receiving an electric shock at the moment they touched the prey, Group H, receiving a shock when they did not obey a previously learnt recall signal and Group R, receiving the electric shock randomly and out of context. The experiment consisted of an adaptation phase, and a main experiment built up by base levels, a preliminary test, a main test and a post-test.

The adaptation phase was used to accustom the dogs to the test-environment so that the animals would not be affected by the change of location during the experiment. The H group was also trained to respond to the command “here”.

Letting the dog wander free inside the test-room for 50 minutes and then checking saliva samples and heart rate measurements established the base levels.

During the preliminary test the dogs were allowed five days of “simple hunting” when they could hunt unimpeded and five days of “hunting impeded” when the dogs were on a leash and therefore unable to hunt. Saliva samples and heart rate measurements took place after all the sessions.

The electric impulses were delivered during the main test according to the groups provided, saliva and heart measurements followed. After four weeks in total absence of experimental related factors, the dogs were brought back into the room where the former tests were held. Saliva and heart measurements were taken accordingly.

Results show that group R shows more signs of stress than group A and H indicating the important effect of a misuse of electric collars. As the dogs were unable to predict the shock the whole situation became frightening. It also showed that group H was more stressed than group A, also this indicates the discomfort in not being able to affect the shock delivery. As the H group was not trained to recall during hunting they were less likely to understand the cause of their punishment, leading to insecurity and stress. Group A was the group that was in most control over their actions and therefore also over the electric shocks given by the handler. They could associate the shock with touching the prey and had the opportunity to stop hunting. Predictability of a shock was established to be the dependent factor of caused stress.

Use of electric collars as an eliminator of an unwanted hunting behaviour is very popular. A two-parted research done by Frank O. Christiansen, Morten Bakken and Bjarne O. Braastad ((Behavioural differences between three breed groups of hunting dogs confronted with domestic sheep, *Applied Behavioural Science* 72 (2001) 115-129) and (Behavioural changes and aversive conditioning in hunting dogs by the second-year confrontation with domestic sheep, *Applied Behavioural Science* 72 (2001) 131-143)) uses the electric collar as an aid to stop dogs from trying to hunt sheep.

The experiment involved 114 hunting dogs of three different breeds. The dogs were walked individually on the leash down a path with sudden unexpected stimuli; such as noises, thrown objects and a sheep tied at the end of the walk. Introducing the dog to a sheep gave the researchers an opportunity to check whether an interest in hunting the sheep was present at all.

Before being reintroduced to sheep the dogs were equipped with an electric collar and then let into a fenced area with a sheep flock. If the dog came within a 1-2m zone of the sheep a shock was given. All administered shocks together with the dog’s reaction towards the sheep were recorded in order to compare the situation when the same experiment took place the following year.

Results showed that when coming back the second year, an decrease in interest towards sheep dominated in the dogs who received electric shocks when approaching sheep during the first year. The study clearly states that the use of an electric collar can be an effective way to get rid of unwanted hunting behaviour.

Discussion:

Failure in timing of shock administration can lead to unwanted conditioning, such as fear of training course, handler, specific commands, unfamiliar objects etc. Even aggression might be triggered by such a mistake.

As both tongue flicking and lowering of body/ear posture is a sign of discomfort and submission the tests clearly show that training by electric shock collars affects the animals in a negative way.

As been showed, the administration of electric shocks is very likely to affect the relationship between the handler and the dog. After training sessions with electric collars the animal clearly shows signs of stress when the handler is present. I strongly believe that we can benefit most from the dogs when they are working in a happy and comfortable environment. How can we possibly expect a dog to perform its outermost when it is affected by submission and fear? This should be most important when using working dogs in the police force, as we rely on these animals ability to perform under critical circumstances. Time consumption while training the dogs in a humane way might pay off by the outcome of happy animals with a high working motivation while performing their tasks.

The use of electric collars may be effective when it comes to elimination of certain behaviour, such as hunting of sheep, but the question is what kind of new behaviours we encourage to replace the former.

When dealing with problematic behaviour in dogs we normally focus on behaviours that are inappropriate in an owner's view. What we sometimes forget is that this behaviour might be totally natural for the dog and by taking it away we automatically increase the animals ability to communicate. In the situation of fear related behaviour we often focus of getting rid of the animal's action, such as barking, biting or other attention seeking actions. As the action disappears we automatically think this is equivalent to reduction of fear, which might not be the case at all.

Instead we should focus on eliminating the cause of the behaviour to reduce the outcome. It is important to understand that an obedient dog is not always a happy dog.

With all the products on the market a great variability is offered to the handler, shock collars may be time saving, but it is a big responsibility to put into an electric device. It is impossible to control such a device in the same way as we can control our voice or body language. How can we know exactly what the animal received during the shock administration? Can we rely on "the 1/1000 of a second" the provider promise us or can, as mentioned above, fur condition and humidity affect the outcome? If so, what happened to the golden rule of being consequent and correcting disobedience in the same way every time it occurs?

Using an electric device, in my opinion, takes us further away from the natural communication of individuals. By doing so, we loose control over fine signals and the valuable information of dog's responses. Elimination of behaviour might give rise to new habits an expression of fears and distress of which character we might not be able to control. Therefore, instead of punishing behaviour we should seek the cause. Once we are aware of the cause we will be able to work in a more gentle way, picking up the signals and understanding our dogs. By doing this we can work as a leader and gain the trust of our animals instead of forcing them to obey. When earning that trust, we create comfort and honesty. Hopefully by that, follows the feeling of being a team instead of just a master and his obedient dog.

References:

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