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■ **Animal welfare issues on the use of rabbits in an animal assisted therapy program for children**

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■ **Η ευζωία του κουνελιού κατά τη διάρκεια χρησιμοποίησής του σε πρόγραμμα θεραπευτικής προσέγγισης με τη βοήθεια ζώων, σε παιδιά**

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ABSTRACT. Animal Assisted Therapy (AAT) is a method of complementary treatment in the rehabilitation of many human illnesses and conditions. Although the dog is the most widely used therapy animal that is used in AAT program, the rabbit can also be used as an alternate animal species and complementary therapy for many diseases. It is an intelligent, human friendly and playful small animal, easily socialized and transported. Also, the rabbit has very good communication through its body language. A special bond, also, exists between children and rabbits, and in the animal world of children, the rabbit is a very popular animal mainly through children's literature. As a result, rabbits elicit positive feelings in children and enhance their imagination. Based on previous experience from an AAT program with rabbits in a children's hospital, the rabbit can be easily accepted by children with emotional or physical problems. In order for an AAT program with a rabbit to be a success, it is very important to guarantee good health and normal behaviour of the rabbit, as well as its proper welfare. The contribution and participation of a veterinarian during the design and the implementation of the program are, also, very important for assuring the success of an AAT program with rabbits.

Keywords: animal assisted therapy, children, rabbit, welfare

ΠΕΡΙΛΗΨΗ. Τα τελευταία χρόνια, η θεραπευτική συμβολή του ζώου συντροφιάς στην αντιμετώπιση διαφόρων νοσημάτων αποτελεί προσέγγιση που χρησιμοποιείται για την αντιμετώπιση διαφόρων παθήσεων. Κύριος σκοπός της θεραπευτικής συμβολής ενός ζώου είναι να βελτιώσει την ποιότητα ζωής των ασθενών, μέσω των δεσμών που δημιουργούνται μεταξύ ανθρώπου και ζώου. Παρά το γεγονός ότι ο σκύλος χρησιμοποιείται ως ζώο εκλογής για την κατάρτιση ενός τέτοιου θεραπευτικού προγράμματος, το κουνέλι αποτελεί ένα ακόμα ζωικό είδος, που μπορεί εξίσου να χρησιμοποιηθεί, εμφανίζοντας μάλιστα σημαντικά πλεονεκτήματα. Είναι μικρό σε μέγεθος, μεταφέρεται εύκολα, είναι έξυπνο και φιλικό προς τον άνθρωπο. Με βάση την εμπειρία από μακροχρόνια μελέτη της θεραπευτικής συμβολής ζώου συντροφιάς σε ογκολογικό τμήμα Παιδιατρικού Νοσοκομείου, το κουνέλι γίνεται εύκολα αποδεκτό και μάλιστα με θετική αποδοχή της παρέμβασης από το σύνολο των παιδιών και των συνοδών τους. Ενώ ένα πρόγραμμα θεραπευτικής συμβολής ζώου στην αντιμετώπιση κάποιας πάθησης καθορίζεται από καθαρά ανθρωποκεντρικά κριτήρια, σημαντική παράμετρος για την επιτυχία του προγράμματος είναι η διασφάλιση της ευζωίας του ζώου που συμμετέχει στο πρόγραμμα. Ειδικά για το κουνέλι, οι συνθήκες στέγασης και διατήρησής του κατά

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τη διάρκεια του προγράμματος, ο σωστός χειρισμός και ο τρόπος προσέγγισής του από τους ασθενείς, καθώς και η κτηνιατρική φροντίδα του ζώου, αποτελούν θέματα που θα πρέπει να καθορίζονται με ακρίβεια κατά τη διάρκεια του σχεδιασμού του προγράμματος, αλλά και να παρακολουθούνται κατά τη διάρκεια της υλοποίησής του. Η αξιολόγηση της ευζωίας των ζώων από εκπαιδευμένο άτομο πριν, κατά τη διάρκεια και μετά την ολοκλήρωση του προγράμματος, συμβάλλει καθοριστικά στην έγκαιρη διάγνωση τυχόν προβλημάτων που μπορούν να εμφανιστούν στη σωματική και ψυχική υγεία του ζώου. Για τους πιο πάνω λόγους, η συμμετοχή κτηνιάτρου, τόσο στη διάρκεια του σχεδιασμού όσο και κατά την υλοποίηση ενός προγράμματος θεραπευτικής προσέγγισης με τη χρησιμοποίηση ζώου συντροφιάς, θεωρείται ιδιαίτερης σημασίας.

Λέξεις ευρετηρίασης: κουνέλι, ευζωία, παιδί, θεραπευτική συμβολή ζώου συντροφιάς

1. INTRODUCTION

Animal assisted therapy (AAT) is a therapeutic intervention in which the physical and/or emotional needs of an individual are met through the use of an animal. It is based on the growing knowledge of benefits that animals can provide to sick, handicapped, old or socially-isolated individuals. The Delta Society is a human services organization that is dedicated to improving people's health and well-being through positive interactions with animals. In an attempt to promote the standardization of terminology, the society has defined AAT as a goal-directed intervention in which an animal that meets specific criteria is used as an integral part of the treatment process. AAT is directed and/or delivered by a health or human services professional with specialized expertise (Delta Society 1992).

The incorporation of an animal in therapy is beneficial, because animals have a natural tendency to create a bond with people. A good therapy animal will seek affection and interact with the patient. Thus, animals promote a warm and safe atmosphere that can be therapeutically beneficial for a patient and help the patient accept interventions that are offered by the care provider (Carmack 1991, Anonymous 1996, Dimitrijevic 2009).

The 1998 Prague Declaration of the International Association of Human-Animal Interaction Organizations urges all persons and organizations that are involved in animal-assisted activities and/or AAT and all bodies that govern the presence of such programs in their facilities to consider and abide by the following points: (a) only domestic animals which have been trained using techniques of positive reinforcement, and which have been, and will continue to be, properly housed and cared for, are involved, (b) safeguards should be in place to prevent adverse effects on the

animals involved, (c) the involvement of assistance and/or therapy animals is potentially beneficial in each case and (d) basic standards should be in place to ensure safety, risk management, physical and emotional security, health, basic trust and freedom of choice, personal space, appropriate allocation of program resources, appropriate workload, clearly defined roles, confidentiality, communication systems and training provision for all persons involved (IAHAIO 1998).

Compared to service animals, which must be trained to do work or perform tasks for the benefit of a disabled individual, therapy animals are usually the personal pets of their handlers, who use them to provide AAT to patients (Anonymous 2009). Although the dog is the most widely used therapy animal in AAT, other species, such as cats, horses or birds may, also, be used depending on the medical condition that requires curative treatment. During the last few years, there is an increasing trend to have a rabbit as a pet animal. This increasing use of pet rabbits prompted us to think about the possibility of using rabbits in AAT programs. The aim of the present article is to present the role of rabbit as a therapy animal and to highlight the main rabbit welfare issues. These welfare issues, which have been taken from the published veterinary literature and our personal experience, should be considered when a rabbit is used in an AAT program.

2. THE USE OF RABBIT IN AN AAT PROGRAM

Depending on the illness, the rabbit could be considered as an appropriate animal species to incorporate in an AAT program. It is an intelligent, human friendly and playful small animal, easily socialized and transported (Adbill and Juppe 2000, Kaminski et al. 2002). Furthermore, the rabbit has very good communication through its body language. A unique bond, also, exists between rabbits and children.

In the animal world of children, the rabbit is a very popular animal with children, mainly through children's literature, as well as songs, drawings and zoo and pet farm visits (Mallon 1992).

In view of the abovementioned characteristics of the rabbit, we decided to use rabbits as complementary therapy for children with emotional or physical problems, as well as for abused and neglected children. This decision was taken despite the fact that the available literature on the use of rabbits in AAT programs is limited. The AAT program was organized and implemented in the Department of Oncology of the P & A Kyriakou Children's Hospital in Athens, Greece. Preliminary results of this study clearly show that there is a positive feedback from all children that participated in the program and their accompanying persons (Loukaki et al. 2009).

3. ANIMAL WELFARE ISSUES ON THE USE OF RABBITS IN AN AAT PROGRAM

An AAT program is mainly managed from an anthropocentric point of view. In most cases, the focus of AAT is the patient and the therapeutic result, irrespective of whether it is beneficial or not, it depends on the physical and mental health of the participating therapy animal. When rabbits are used in an AAT program, there is a moral and legal obligation to safeguard the welfare of those animals. Discomfort and distress before, during and after their use may seriously affect the animal itself and, consequently, the expected results for the patients.

Defining animal welfare is a complex issue and different definitions have been proposed at various times. One of the first definitions was published as a minimal standard for farm animals by the Brambell Committee in 1965. This definition has since become known as the "five freedoms": freedom from thirst, hunger and malnutrition; freedom from discomfort; freedom from pain, injury or disease; freedom to express normal behaviour; and freedom from fear and distress (Brambell Committee 1965). Others have proposed that the ability of an animal to cope with its environment, and thus exert control over its life, may be more important than any of the five freedoms of animal welfare (Webster 1994). This definition is in line with Broom and Johnson's definition of animal welfare who defines animal welfare as "its state as regards its attempts to cope with its environment"

(Broom and Johnson 1993).

Since "pet" rabbits retain many of their wild-type behaviours and express them when they are given the opportunity, it is very important for those planning an AAT program with rabbits to consider their behaviour and biology in the wild, especially when designing rabbit housing and care programs (Lehmann 1991, Stauffacher 1992). In fact, the Delta Society emphasizes that AAT may be inappropriate for the animal when (a) injuries from rough handling or other animals may occur, (b) basic animal welfare, which includes veterinary care and access to water and exercise areas, cannot be assured, and (c) the animal doesn't enjoy visiting the human patient (Zamir 2006). It is, also, important to determine whether the animal can be appropriately monitored for signs of stress. Monitoring signs of stress is probably the most important consideration for any species that is used as therapy animal, because the AAT environment can be stressful for them. Critical for the success of an AAT program is whether an animal has the capacity to recover from its perception of encroachments, cope comfortably in the AAT environment and enjoy the human interaction.

The main animal welfare issues for rabbits in an AAT program are their housing and husbandry conditions, human-animal interactions and veterinary care.

3.1. Housing and husbandry conditions

The rabbits which are used in an AAT program are usually pet animals brought by the caretaker to the hospitals or the institutions where the patients reside. Depending on the internal regulations of the institution where the patients are kept, rabbits may be housed in the same building where the AAT sessions take place. If transportation is needed, the rabbit could be confined in a proper carrying cage or basket for the journey. If no suitable carrying cage is available, the rabbit can be transported in a secure cardboard box with holes punched in the walls for ventilation.

An acclimatization period should be provided after its arrival at the location of the AAT, depending on the journey time and the frequency of each journey. Once the rabbit is no longer stressed and becomes familiar with the journey between its home and location of the therapy, the acclimatization period could be shortened.

Special concern should be given to provide proper housing for the rabbits based on their behavioural and

physical requirements. The cage should be a pleasant place to spend time for the rabbits and the bigger, the better. A general rule of thumb in selecting the cage is to choose one that is at least four times the stretched out size of the adult rabbit (Royce 1996). If rabbits are kept in a hospital or institution where the AAT program is taking place, they can be housed either individually or in groups in either cages or floor pens. In the case of group housing, the group must be stable and harmonious. Male rabbits are difficult to house in groups as they fight vigorously. If group housing is not possible, frequent human contact should be provided. The guidelines for the accommodation and care of animals that are used for experimental and other scientific purposes of the European Commission could be used for rabbits that participate in an AAT program (European Commission 2007).

Environmental enrichment items within the cage will increase the rabbit's behavioural repertoire and reduce stereotypic behaviours. Hay and grass cubes will prevent boredom and provide roughage. A wide range of enrichment items is commercially available for rabbits and it includes mirrors, plastic or rubber objects and stainless steel rattles and balls (Morton et al. 1993, Johnson et al. 2003). Each enrichment item should be carefully evaluated to ensure that there is sufficient evidence of use, they are not toxic and are not capable of causing any injury.

3.2. Human-rabbit interactions

Although rabbits usually enjoy interacting with humans, they need to be handled with great care, because they are easily frightened (Brewer 2006). Therefore, proper handling by humans is very important for these animals. Rabbits that are used as therapy animals are routinely manhandled during an AAT session and, as a result, a small number of animals get injured. Even when gently handled, rabbits can become anxious when they are exposed to strangers who caress them. Therefore, before using a rabbit in an AAT program, it is very important to train it for each project, such as daily presentation to a large number of people especially children, unusual noises and smells, and transportation.

Human-rabbit interactions are less likely to cause stress to the rabbit during husbandry or AAT when the behaviour of the staff and patients is compatible with the animal's natural behaviour. Rabbits can recognize

and discriminate between different humans. Therefore, positive contact with familiar humans in the form of handling, training and general habituation to human contact will reduce stress when they are handled during an AAT session (Davis and Gibson 2000). Rabbits that are to be used in an AAT program should, also, be exposed to the staff that will run the program before its start. Based on our experience, special concern should be given when incorporating rabbits into an AAT program for children. Most rabbits do not like to be held or handled and may try to escape a well-meaning child's arms by biting and scratching. In addition, a rabbit's back may be easily broken as a result of improper handling (Royce 1996).

Before starting any AAT session, it is important to inform the patients about the animal species that will be used in the session. This can be done using photographs or videos depending on the age of patients. The animal's natural behaviour and needs and ways of safe contact with the animal should be properly explained to the patient by the participating animal caregivers or veterinarian. Introducing the animal to the group gives the opportunity to the animal to become familiar with the new environmental conditions. For this purpose, another 'vital ingredient' in the AAT program is the pet helper. This individual should be very skilled, because he/she acts as the interpreter between the terrified animal and the frightened patients (Kobayashi et al. 2009).

3.3. Veterinary care

All rabbits that are to be used in an AAT program must be veterinary checked in order to ensure that they are in good physical and mental health before incorporating them into a therapeutic process. In addition, a clinical examination should be performed on the rabbit(s) before each AAT session. Special concern should, also, be given to the temperament of the rabbit towards humans.

To avoid aggression and any troublesome behaviours, as well as for medical reasons, rabbits must be spayed or neutered. Studies have shown that 50 to 80% of unsplayed female rabbits develop uterine and/or mammary tumors by five years of age (Green 1958, Toft 1992).

Special concern should be given to the possibility for disease transmission from the rabbit to the patients and from the patient to the rabbit, as well as the deve-

lopment of allergic reactions in patients who are participating in the AAT program (Morrison 2001, Mani and Maguire 2009).

4. ASSESSMENT OF RABBIT WELFARE

When using rabbit in an AAT program, it is important to establish a mechanism for assessing its welfare during the program and the early recognition of behavioural changes which are often signs of poor welfare. Behavioural signs of stress in rabbits may be subtle and may not be immediately obvious to an untrained human observer. Thus, the assessment of rabbit welfare should be conducted by a person with considerable knowledge on the biology and normal behaviour of rabbits, including its ability to cope and adapt with its environment (Fraser 1993). Behavioural and physiological changes, such as unexplained aggression, hiding, chewing cage bars, excessive grooming or reduced grooming, increased or decreased food consumption and unusual movements, such as repeated circling within the cage, could be expressions of stress, fear or depression (Mayer 2007). Therefore, an assessment of the rabbit's behaviour should be made before, during and after the AAT session by a well-trained person.

Based on our experience, rabbits should be interchanged in an AAT program, so that they are not separated from their group for long periods. For this reason, the use of two different rabbits in the same AAT program is preferred. Rabbits should not be used if they need to cope with adverse environmental conditions, such as heat or large temperature differences (outside housing in winter and working in heated rooms). Special attention should be made for signs of stress-related behaviour, such as freezing from fright. If such signs appear, the therapy session must be stopped.

In order to guarantee the proper use of rabbits in an AAT program, specific institutional guidelines

should be in force. In addition, the institution, in collaboration with a veterinarian, should establish a code of good practice for its AAT programs that includes animal welfare issues. This code should include the following requirements: (a) rabbit welfare must be a priority for the therapist, (b) the rabbit to be used in the program must never be forced "to have to leave home in order to go to work" or to perform actions that it is reluctant to perform, (c) the rabbits should be given time to acclimatize before each AAT session, and (d) rabbits must be protected from individuals that are carrying transmissible diseases to rabbits (Preziosi 1997).

5. CONCLUSIONS

AAT is a novel therapeutic interventional program with important benefits in the management of patients with chronic diseases and a prolonged hospitalization. Although the dog is the most widely therapy animal, a rabbit can, also, be used in most AAT programs, as it is an intelligent, human friendly small pet animal that can be easily socialized.

In most cases, an AAT program is mainly managed from an anthropocentric point of view and ignores the important role of the animal's physical and mental health in the treatment. Therefore, special concern should be given to animal welfare in an AAT program. The assessment of rabbit health and welfare before, during and after an AAT session is very important and should be performed by a person, preferably a veterinarian, with considerable knowledge of the biology and behaviour of this animal. Behaviour of the rabbit should be evaluated regularly in an AAT program and during an AAT session. As soon as behavioural changes are observed and compromised welfare is recognized, the treatment should be postponed. Institutes that have an AAT program with rabbits should create a code of good practice in order to guarantee the rabbit's welfare in the program. ■

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