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Nursing considerations for wildlife in practice

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ABSTRACT: Nursing wildlife species can be difficult in a veterinary practice. There is an inherent responsibility to attend to physical injury whilst also providing a suitable, behaviourally enriched environment. Decisions to the ethical approach with treatment plans should be openly discussed with the whole veterinary team to ensure the patient's best interests are achieved. The goal being that that upon recovery, the animal should be able to thrive in the wild, more than simply survive. It should be able to return to its natural behaviour at the time of release. Rehabilitation centres should be involved in treatment plans, rehabilitation requirements and facilities available.

Keyword: Wildlife nursing; ethics; rehabilitation; welfare

Wildlife are commonly seen in veterinary practice, and thus it is important that veterinary staff can house, provide for, and understand these animals in order to provide an appropriate level of care during their time at the practice.

Legislation

Veterinary staff are obliged to give first aid to any animal presented to a veterinary centre (Fletcher & Lea, 2012). In the Royal College of Veterinary Surgeons (RCVS) guidance first aid can include fluid therapy, pain relief and euthanasia. Prior to administering medications, under the Veterinary Surgeons Act 1966 (RCVS 2017), it is important to get them prescribed by a veterinary surgeon with their instruction to administer the medication. Veterinary nurses should gain information on what specific medication, route of administration, dose to be administered and frequency of administration.

Under the Wildlife and Countryside Act, 1981, the person who picks the animal up from the wild is legally their owner (Gov, 2019a). It is important to get the wild animal's care relinquished to the veterinary practice at point of admission. Consent for transfer of care and/or consent for any treatment, should owners refuse to relinquish care, is required to be in a recorded and documented form such as recorded telephone lines and/or consent form. If transferring the patient to a wildlife centre for rehabilitation is likely, consent to pass finders details on (as required under General Data Protection Regulation) can also be gained at the same time as in many cases this is required.

Where possible, animals are to be released where they were found post recovery and rehabilitation. This site should be checked for suitability ensuring that there is a good food source, shelter, others of same species thriving and safe from over predation and over population. Some species, such as badgers, have a strong and dynamic social grouping and release into new territory is detrimental to the individuals' ability to survive on their own and with danger from individuals already habituating that environment. New release sites should only be sought if their found location is not suitable for the individuals needs and requirements to thrive. Protected species such as barn owls require releasing in the location they were found where possible as documented in the Wildlife and Countryside Act, 1981 (Gov, 2019a).

Recent restrictions have been placed on non-native species and some species require a licence to allow release. Some non-native species are understood to be detrimental to the health of the native wildlife population and ecosystem and therefore it is illegal to release these individuals or keep them in captive care (Table 1) (Gov, 2019b). Due to this, the only option available is euthanasia.

Predator/prey

It is important to consider the place the species plays in the ecosystem and what animals are predators for them and what they are predators for. From this information the most suitable housing ward can be used whilst it is in your care. As with domestic pets they should be housed away from predators and prey to reduce the stress to them and other animals in the ward.

DOI: 10.1080/17415349.2020.1790448

Table 1. Some common wildlife casualties and their release restrictions (Gov, 2019b).

Common Name	Scientific Name	Release Restriction
Barn Owl	*Tyto alba*	Release at location found. License required as protected species.
Canada Goose	*Branta canadensis*	requires a licence to release.
Grey Squirrel	*Sciurus carolinensis*	Illegal to release
Muntjac Deer	*Muntiacus reevesi*	Illegal to release

(Stocker, 2005a) For example, a Buzzard should be kept out of a kennels/cattery ward but also not placed in a small mammal ward. Therefore, an isolation facility may be best suited or a clinical room of its own if isolation is not available. (Figure 1)

Humans are also a predator to wildlife and therefore care should also be taken not to house them in a busy environment but also when handling them they will be more likely to defend themselves out of a fear response (Figure 2) (Stocker, 2005b). Housing should not only be out of sight of humans but also out of human noise, this could be at the far end of a ward or in a room of their own where they are minimally disturbed. Hides can also provide a place for the individual to go where they are unable to see humans, however, it should be ensured that they have access to food and water in the hide so they can eat when hidden and feeling safer in the circumstances. (Figure 3)

Hands off

As humans are a predator to the wildlife, how we handle these patients must be quick and efficient. Any handling and interaction with wildlife is stressful and can, in some circumstances, lead to further exhaustion (Chastain, 2018). Capture myopathy is a condition, which is commonly seen in deer but any species can suffer with it, where their body responds to increased stress and can cause hyperthermia, ataxia, muscle weakness, renal and cardiac complication and can become life threatening (Green, 2003). Capture myopathy can be reduced by efficient handling and returning to enclosure, cool environments when handled and, active efforts to reduce stimulus in the area e.g. noise (Figure 4).

Reducing the risks as much as possible can be done by ensuring everything is prepared prior to approaching the patient which creates an efficient performance of events and ensures the patient can be returned to their kennel space as quickly as possible. Ensuring each member of staff knows their role and is legally, practically and competently able to perform their task (Chastain, 2018) will aid efficient performance. If it is uncertain of the exact procedures or medications due to an examination being required, having all the possibilities prepared in advance allows for efficient assessment and medicating.

Only essential staff members are required when handling wildlife to reduce the stress levels of the individual due to less predators around (Stocker, 2005a). Despite some cases and species being of interest due to their rarity, it is important to prioritise their stress levels and welfare.

Figure 1. Tawny Owl (*Strix* aluco) housing in veterinary practice, kennel allowing padded flooring and can be hidden out of public view in a hospital raptor ward.

Wildlife rehabilitation

Any patients which are treated in a veterinary practice, (domestic or wildlife), their aftercare and ability for recovery should be considered when organising a treatment plan. If the provisions of the required aftercare is not possible due to rehabilitation restrictions or patient compliance and welfare, an ethical decision should be made in the patient's best interests (Brockbank, 2007). It is important to have a good understanding of the capabilities and limitations local wildlife centres have, ensuring an informed decision can be made. Where the patient is stable, discharging to a rehabilitation centre is considered a high priority as their recovery is likely to be enhanced due to reduction in stress and better rehabilitation facilities available as the recovery allows.

It is important for social wildlife to be housed with their own kind, especially when rehabilitating juveniles to reduce the likelihood of imprinting (Llewellyn, 2003). If the patients can be rehabilitated and still retain their wild instincts, then they have a higher survival rate. Any individuals which have become tame or confident around human activity are less likely to be able to be released and may need a captive environment for constant survival, ethics of this should be considered (Varga & Gott, 2012).

Ensuring a good relationship with the wildlife centres locally to the practice is beneficial for advice to be gained from them with regards how patients tolerate different rehabilitation care requirements (Best & Mullineaux, 2003). Some patients struggle to cope with captive environments during rehabilitation, with deer and badgers being a particularly stressed species when restricted (Oak

Figure 2. Common Buzzard (*Buteo* buteo) showing open mouth stress sign commonly seen when in captivity.

Figure 3. Mallard (*Anas platyrhynchos*) duckling housed with hide whilst in veterinary environment.

Figure 4. Fallow Deer (*Dama* dama) being handled with towel over head to reduce stress signs and reduce risks of capture myopathy.

and Furrows; Personal communication; 18th October 2018). This should be taken into consideration when deciding on their aftercare requirements.

Care provided

Knowing the limits and skills of the veterinary team is important prior to admitting the wildlife patient. This highlights if the provisions are available for care and safe housing and treatment of the individual. Should this not be available, first aid should be given with discharge to alternative facilities considered.

Nutrition is a key provision that needs to be considered when housing the animals and how nutritional support can be provided in situations of anorexia. Stress, as well as illness, increase the nutritional requirement and calculating nutritional requirements to this provision is important (Stocker, 2005). In situations where veterinary staff may struggle to provide this, and the wildlife centre is capable, joint care of the individual is to be considered in the patient's best interests.

Housing facilities also need to be considered as badgers and deer are particularly difficult to house and look after in a stress reduced method (Best & Mullineaux, 2003). This causes the wildlife to struggle to cope and their recovery decreased with some individuals. Staff safety should also be considered and if the suitable personal protective equipment (PPE) is not available then alternative plans are required. Suitable PPE can include having a large enough crush cage or muzzle for any aggressive mammals to allow handling. (Figure 5). Without suitable equipment, injury to staff could occur (Chastain, 2018). Deer, badgers, foxes and swans are amongst some of the more difficult patients to house safely for patients and staff. These individuals may be more suited to being housed and care being provided at a rehabilitation centre as soon as possible.

Ethical balance

It is important to understand the ethical balance as to what is fair and right for the individual and where the situation goes beyond being in the best interest of the individual. Ethical decisions are required as a team, including the rehabilitation centre if they legally remain the owner. Ethical discussions are required throughout the journey of the rehabilitation as well as at the start and point of release. Ethical situations can alter and what is in the patient's best interest can vary throughout the recovery process.

Some areas of consideration include veterinary skills available; abilities, rehabilitation, time and process; species being dealt with;

Figure 5. Baskerville muzzle fitted to a fox (*Vulpes Vulpes*) for staff safety.

Figure 6. Mallard (*Anas* platyrhynchos) with Angel Wing a condition which has multiple ethical considerations.

chances of recovery and survival in the wild post release. If any of these considerations are not in the patient's best interests, then decisions about continuing treatment should be made amongst the team. Consideration of recovery time is required as a patient may undergo a short period of intensive care with a longer period of low intensity rehabilitation which individuals may tolerate.

Euthanasia in patients with a quality of life compromise is not a negative option as it is alleviating the suffering of the patient both physically as well as mentally. The decision of 'we can' should not provide the direction of treatment should it compromise the physical or mental welfare of the individual (Figure 6). It can be detrimental to put an animal through all you can if it were then to suffer during the rehabilitation or when released.

Ethical considerations must be made when assessing the successful release of the individual, both at the start of the rehabilitation process and prior to release. If a patient is not going to recover to a releasable state, it can be considered that treatment is not suitable for the individual if it is showing signs of being unable to survive and thrive in a captive environment. During these decisions, the level of captive environment should also be considered as some captive environments are suitable for non-releasable animals and provide a safe environment for them to continue their lives. Ethical discussions as to the individual's ability to live in these environments should be considered, taking into account their compromise which prevents release. If it is to be considered suitable, the environment should provide the same as the wild environment but safety from predation and reliable natural food source should be ensured.

Conclusion

Knowing the most suitable treatment option is individual to the patient and not species specific. Whilst patients are being cared for in captivity, it is important to ensure the individual's welfare is assessed and their needs met. Constant communication throughout the rehabilitation to monitor progress, assess its welfare and recovery, and evaluate the proposal for release is essential. When treating wildlife, the main release factor should be its ability to survive and thrive in the wild. Wildlife should be able to protect themselves and be able to source food and where possible, maintain the wild population.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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