

Reasons for the presentation of adult badger casualties to a rehabilitation centre and a veterinary surgery and outcomes following treatment

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Veterinary medicine is increasingly firmly based in scientific evidence, with a strong emphasis on welfare and ethics. Vets have a legal responsibility to care for British wildlife, which is regulated by the Royal College of Veterinary Surgeons. Despite this obligation for all to care for wildlife species, the evidence to support various methods of care is at best often anecdotal and at worst an animal welfare issue. This is compounded by a lack of interest from some vets and a lack of time and funding for treating wildlife casualties.

Badgers are one British wildlife species where there is extensive published literature. Unfortunately this work has concentrated mainly on the relationship between tuberculosis (*M.bovis* infection, bTB) and badgers and is extremely limited in information regarding clinical diseases and how to treat sick or injured animals. Badgers are a relatively easy species for vets to study as a result of their physical size, biological similarities to familiar species (dogs) and being commonly presented to vets as a result of injury and disease.

The most important things that both rehabilitators and veterinary surgeons need to know about a species are:

- What are the common presentations?
- How do we effectively triage casualties?
- What conditions are sensible to treat?
- How do we treat these conditions?
- How long are we able to successfully keep casualties in captivity?
- How should we keep casualties in captivity?
- How do we assess the success of this process of care?
- How do we assess the success of the eventual release?
- What effects might releases have upon other wildlife, livestock and man?

In order to begin to try and answer some of these questions in the case of badgers, detailed clinical records were made for 123 adult badger casualties seen by a wildlife rescue centre (Secret World Wildlife Rescue, SWWR) and a veterinary surgery (Quantock Veterinary Hospital) over a 45 months period. The records included both basic data (including; date, location where found, type of place in which found, reason for presentation, sex, weight, length, body condition, tooth wear) and clinical data (including; dental abnormalities, bite wounding, clinical examination, general health profiles, bTB serology, radiology, treatment, outcomes). Records from SWWR helped to provide additional rehabilitation data such as; how long the animal was kept in captivity, how long it took to eat, the amount of medical treatment it received, the amount of veterinary involvement in its care, the long-term outcome for the animal. These results were then

analysed and considered alongside other current literature. Some of the preliminary findings relating to why badgers were presented and what the outcomes for the animals were are described here.

Badgers were found by members of the general public, in a variety of situations. The most common place for a badger to be found was the roadside (36.5%) with buildings (both domestic and farm buildings) the second most common site (33%). Female animals were more commonly found at the roadside than males and male animals were more commonly found in buildings. There was a seasonality to presentations which appeared to follow peaks in badger breeding activity in the Spring and Autumn. Badgers were most commonly presented as a result of road traffic accidents (RTA) (34%), obvious wounding (19%) or simply as a result of being 'in the wrong place' usually a building (18%). The number of male (49%) and female (51%) animals presented was almost equal. Badgers presented in a range of body conditions, although 38% of animals were considered to be in poor conditions. Bite wounding (badger-badger 'territorial' wounding) was a common presentation, with 55% of animals having some evidence of wounding. Wounding was more common in male (78%) than female (34%) animals and more common in those animals found in buildings (79%) than at the roadside (35%). The seasonality found to be associated with the incidence of wounding followed that of the badger breeding seasons. These findings illustrate that admissions of casualties are dependent both upon features of badger ecology and upon the naturally occurring interfaces between badgers and man.

A small subgroup of animals (41), were tested retrospectively for evidence of *M.bovis* infection (bTB) using a single Elisa test and wound swabs as applicable. Three animals were found to be positive on serology only, one animal positive on wound swab only and one animal positive on both blood test and wound swab. These findings, although only a small study, do illustrate that badgers coming in to wildlife hospitals may carry *M.bovis* and suitable risk assessments and health and safety protocol should be in place in such centres to deal with this risk.

The eventual outcomes for the 123 casualties in the study were classified according to if the animals were ultimately released (39%), were euthanased (49%) or died (12%). These findings are similar to those of other studies, including BWRC data, where around one third of all casualties were released. The majority of animals that died or were euthanased had the outcome reached within a few days, suggesting that the triage process used was efficient in minimising the time spent in captivity if the outcome was to be poor. The prognosis for animals admitted in the Summer months was worse than that for those seen in the Winter and Spring, this was a reflection of the type of casualties seen most commonly in each season. The prognosis for casualties found following RTA was poor (27% released) compared to those animals simply found in 'the wrong place' (74% released) or with evidence of wounding (59% released). More male animals (43%) than female animals (34%) were successfully released. As would be expected the prognosis for animals in poor condition was poor (72% euthanased, 12% released) compared to those in good condition (37% euthanased, 60% released). Where there was evidence of wounding the prognosis was very dependent upon the presence or absence of concurrent medical problems and therefore relied upon complete examination of the casualty. Where

wounding alone was found the prognosis was good (76% of casualties released) but when other problems were found the prognosis was poor (17% of casualties released).

These basic findings show that badgers present for common reasons and these tend to have common outcomes. The reason for presentation and the situation in which the animal is found can therefore add information to the triage process. Effective triage speeds up the decision making process and this is very important for the welfare point of the casualty. The findings however, also show the importance of a thorough clinical examination, in order to avoid presumptions regarding presenting signs and likely outcome, and such examination should wherever possible also be incorporated into the triage process.

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