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### **Rabies in Bali, common misperceptions and the way ahead**

Rabies is a problem in Bali, of that there is no doubt. However if treated quickly and properly it can be healed in almost 100 % of cases. The disease can be eradicated on the island, but only if the proper measures are applied.

It is a sad misperception that rabies can be controlled through culling even though at first glance it appears a logical option. Culling in fact aggravates the problem and has never been successful in controlling the disease. According to the World Health Organization [WHO] rabies can only be controlled through vaccination in combination with sterilization. It has worked in India [Chennai!] Costa Rica and many other parts of the world.

In Bali we have 1 dog per 6 – 7 people. In Costa Rica the ratio is much higher, as there is 1 dog for every 3 people. And yet, Costa Rica has been rabies free since 20 years. The country vaccinated its dog population according to WHO protocol. They did not cull. Sri Lanka eliminates 35.000 to 50.000 dogs per year, Ecuador killed 24 % of its dog population, in Bangkok 500.000 dogs were killed between 1997 and 2000 – and all still have rabies.

#### **Why doesn't culling work?**

Most of Bali's dog population is free roaming. The number of dogs depends greatly on the available food. This principle applies to any population of creatures in any eco system. If you take out a great number of dogs the numbers will decrease in the short run but peak afterwards because for a short period of time a lot of food will be available to a smaller population. This results in more surviving and stronger puppies in the next generation and a new peak in numbers. So the effect is very limited.

Another fundamental fact is that dogs are territorial. They guard and protect their territory against stray dogs. So if you have a vaccinated dog it will prevent unvaccinated or possibly diseased stray dogs from frequenting the area. Vaccinated dogs are our 'first line of defense'.

#### **The Way Ahead**

In Bali we need to vaccinate at least 70 % of the dog population in order to overcome the disease. Organizations like BAWA [Bali Animal Welfare Association] are at the forefront of fighting rabies on the island. So far BAWA have vaccinated over 70.000 dogs in Gianyar with encouraging results.

Treated dogs are marked with red or blue collars for survey reasons. The Bali government recently announced its intention to launch a massive 3 month vaccination campaign in September aiming to inoculate all Bali dogs.

Sterilization in combination with vaccination makes sure that the population can be reduced in a controlled and sustainable way. Culling is counter-productive.

### **Treatment Protocol**

Everyone on Bali – residents and visitors alike – need to be made aware of what to do if they get bitten by a dog or any other animal capable of carrying rabies.

If bitten, flush and scrub the wound immediately for at least 15 minutes with soap/detergent and water, or just water alone if no soap/detergent is available. It is very important to prevent the virus from entering the body and central nervous system. Detergent breaks down the walls of the virus. The wound should also be disinfected with ethanol [alcohol] (700ml/l) or Betadine (tincture or aqueous solution).

Post exposure treatment must be continued at a clinic or hospital as soon as possible. Usually the treatment consists of emergency vaccination as well as a tetanus shot. In serious cases immunoglobulin needs to be administered. However this is a great problem because immunoglobulin is very scarce in Bali and expensive. If in doubt patients need to seek treatment in Singapore or Australia.

Sanglah hospital in Bali is the official rabies treatment centre, private health providers like International SOS or BIMC are amongst the best prepared.

Once rabies symptoms are detected in a person the disease will be fatal.

### **Rabies and the Tourism Industry**

Knowledge about rabies is still suboptimal in Bali. However the tourism industry, spearheaded by Bali Hotels Association [BHA] is working hard to raise awareness and to empower its members to react to the threat in an adequate manner. The association is building alliances with health providers, producing bi-lingual information brochures for hotel managers as well as local staff. During a recent workshop in Sanur hotel staff was instructed on how to detect, treat and eradicate rabies. BHA is supporting BAWA, the Bali Animal Welfare Association in their fight against rabies following proven WHO protocol.

If reason prevails and official decisions as well as actions to eradicate rabies in Bali are evidence and best practice based, rabies will be successfully fought on the island,- just as it was in other parts of the world.

For further information check the extensive information on rabies, its treatment and eradication on the WHO rabies information websites and contact BAWA for a local update.

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