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REPORT OF THE EUTHANASIA OF TWO HUMPBACK WHALES USING BARBITURATES.

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Abstract:

We describe two cases of humpback whales that stranded and were euthanized using barbiturates. The first case was a 10 meter whale and the second was a calf of 4 meters total length.

Report:

Case 1:

On the morning of 04-aug-2007 a male Humpback whale 10 meters total length stranded on a sand island in the mouth of the river Jequitinhonha, Bahia State – Brazil (15.85046 S; 038,85458 W). The locality was difficult to access and the rescue team arrived at night of the same day.

The whale had extensive loss of skin and severe sunburn (figure 01) and the local conditions made it impossible for a tug arrive close to the beach. The rescue team determined that euthanasia was the best option for this animal.

In the morning on 05-aug-2007 the local Hospital provided all the stock of thiopental, Ketamine and Potassium Chloride (KCl) to be used in the euthanasia. At 09:00 a.m. the whale was still in the water and the tide was going out. We administered 6.500 mg of Ketamine IM (figure 02) to tranquilize the whale and provide increased safety to access the tail. We used a needle of 11 centimeters long to penetrate the blubber and hit the muscle.

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When the whale was completely out of water we started to find a vein to administrate the barbiturates. At 02:30 p.m., after many attempts we have success and start the administration of 6.000 mg of Thiopental EV in a ventral fluke vein. We were unable to administrate all the anesthetic rapidly due to the small diameter of the needle.

At 02:45 p.m. the whale exhibited difficulty in breathing and became more agitated, shaking the tail and muscles making it impossible to give more anesthetics by an intravenous route.

Since it was very dangerous working close to the tail at this time, we chose to administer 42.000 mg of KCl intramuscularly to relieve the suffering of the animal. At 02:50 p.m. Potassium Chloride was administered and the animal stopped shaking and lost the eye reflex. At 3:00 p.m. the whale died.

Case 2:

On 08-sep-2009 a female Humpback whale calf 4 meters in total length stranded for the first time in Guriri Island, Espirito Santo State, Brazil (18,89445 S; 039,74458 W). The calf was refloated by local people and when the rescue team arrived there was no sign of the animal.

We monitored the beach and at 09:30 p.m. the animal was found stranded again 15 kilometers south of the first stranding. Based in video images of the first stranding we concluded that this was the same animal. Even through at night it was impossible to see if there was an adult humpback whale in water near shore, we chose to make another attempt to refloat the calf since the calf was in good shape and without injuries.

At 02:30 a.m. of September 9th we were able to refloat the whale and she moved away from the shore. We monitored the beach for half hour before returning to the city. The next morning we reestablished the beach monitoring and at 10:00 a.m. found the calf stranded approximately 500 meters from the last position.

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The conditions of the animal were worse, with increased respiratory rate and less reactive responses. We opted not to attempt to refloat the animal and elected to euthanize the animal.

We contacted the local Hospital for the drugs and administered a benzodiazepine as a pre-euthanasia drug. In this case we used 13 ml of de Midazolam IM (figure 03) using a needle 4 centimeters long and 12 millimeters in diameter. We tied to access a caudal vein but we were unable to locate any. Then we used a needle 11 centimeters long to try administrate thiopental via intra-cardiac injection. We were unable to access the heart so we administered the thiopental in the pleural cavity 15 minutes after the administration of the pre-anesthesic drug (figure 4). This animal received 2000 mg of Thiopental (solution at 2,5% - 80 ml). Five minutes later the calf had no eye reflex and the heart beat stopped.

Discussion:

In the field conditions the access to an animal's veins may be difficult and dangerous, especially in great whales. The use of IM pre-anesthetic agents could help reduce the stress of the animal, reduce their movements and possibly increase safer access for the administratration of additional agents into the veins of the tail.

The use of thiopental as an euthanasia agent requires a fast administration of the drug to avoid adverse reactions like respiratory depression and tremors.

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Figure 01. Case 01 - Humpback whale with severe loss of skin and sunburn

Figure 02. Case 01. Administrate of Ketamine.

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Figure 03. Case 2 - Administration of Midazolan.

Figure 04. Case 2 - Administration of Thiopental.