



August 2020 Bulletin

State of Nevada Board of Veterinary
Medical Examiners

Avoiding Thermal Injury in Surgical Patients

I still remember the first thermal injury patient I cared for over ten years ago. She was a sweet cat who sustained extensive burns along her back from a heating pad used during surgery. I remember at least five veterinarians involved in her care that spanned over six months and required numerous tissue grafts. She survived, but with extensive disfiguring scars. We can all agree these cases are awful. The bigger issue is how do we prevent them?

Sedation and anesthesia:

We know that sedation and anesthesia compromise our patients' ability to prevent thermal injuries by limiting their ability to move and as well as reduce the patient's ability to maintain their own body temperature. The veterinary team becomes responsible for providing methods to prevent heat loss and promote active warming, as well as prevent iatrogenic burns. It is fortunate that there are many methods and devices at our disposal; however, the sheer number of options can make the decision on protocols and equipment seem daunting. So, what are the options and which devices had been associated with injury and could lead to potential Board complaints?

Devices:

Passive devices and methods attempt to prevent heat loss from the patient thus lowering the possibility for needing active warming devices. The passive device insulates against heat loss and is the most simple and safe. Blankets, towels, body suits, and socks are the most common options and offer both inexpensive and safe insulation. Active warming devices range from simple and inexpensive to more complex and costly. Active warming can include: towel heaters, rice bags, heating discs, fluid bags, heat lamps, electric pads, electric surgery tables, electric cage floors, circulating warm water pads, IV fluid line heaters, water bottles, breathing circuit heaters, and forced warm air blankets. The AVMA PLIT and our board have identified **the most common devices associated with patient burns are electric heating pads intended for human use and those heated in a microwave prior to use** (rice bags, fluid bags/bottles, and discs).

Procedures:

Any procedure that involves sedation and/or anesthesia will likely need thermal support and therefore is at risk for iatrogenic burn, but the **most common procedures that have resulted in claims to State Boards are dental treatments and cesarean sections.**

Fortunately, iatrogenic burns are rare, but when they occur, they are usually unexpected and catastrophic. Tissue necrosis over a large area is common in these cases and requires costly tissue grafts, long term wound management, ongoing laser treatment, long term medication administration, and even euthanasia.





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When we see cases brought before the Board, they did not involve a new device or new protocol for the hospital, but instead resulted from protocols and devices that have been used for years without incident or a lack of review of older protocols. Device failure can occur, but more often than not it is human error.

These injuries are visually disturbing for the owners and painful for the patient, which can increase the likelihood that these injuries will result in board claims.

So, what do we do to reduce iatrogenic burns?

1) Whichever device you choose, it is wise to follow the manufacturer's recommendations for operation and have devices undergo regular maintenance. Consider scheduling regular tests of each device for malfunction, accuracy of temperature, and damage and replace or repair equipment as needed.

2) Ensure regular checks of each patient during sedation or

anesthesia for more than just body temperature. Make sure the equipment is working as it should, that the devices have not slipped to a pressure point on the patient, and that the insulation between the patient and the device has not slipped.

3) Avoid devices that are not made for veterinary patients. Devices that have been more often associated with iatrogenic burns are electric pads designed for human patients and those heated in a microwave prior to use.

4) Use special care and attention for patients at a higher risk of thermal injury such as geriatric patients, patients with diabetes mellitus, hair loss, or shaved areas. Use special care during procedures that require long anesthesia times and/or where fluid can come in between the patient and the warming device resulting in increased risk of iatrogenic burn, such as during dental treatments.

5) Utilize temperature readings of warming devices from a thermometer or devices that have a limitation on how hot a device can become so that if a device is being used the temperature can be verified or is unable to become hot enough to create a burn on the patient.

Do these cases still occur?

It has been ten years since I cared for my patient that suffered that iatrogenic burn, but these cases are not of the distant past. The Board office receives burn case complaints regularly and several have been filed in 2019 and 2020. Many have resulted in disciplinary actions.

Forced warm air systems are expensive, are they worth it?

Of course, the decision to purchase equipment is complex. We must consider overhead, recapture cost, use cost, repair cost, and depreciation. Another consideration is: **what are my potential costs of not purchasing this device?** The AVMA PLIT published a story of an iatrogenic burn resulting from a heating pad after a cesarean section. The insurance carrier paid \$20,000 to settle the claim with the owner, but since the veterinarian did not have license defense coverage, they did not offer the veterinarian support during State Board proceedings. Another case reported by the AVMA PLIT in 2018 involved a patient that suffered iatrogenic burns from an electric heating pad used during a lengthy dental treatment. While the insurance carrier covered the cost of the patient's care of about \$3000, the owner created an extensive social media campaign including heart wrenching images of the burns that likely did significant damage to the clinic's reputation and income. If it is at all possible to incorporate a warm air system, it is a valuable tool that gives practitioners and staff peace of mind, could prevent serious injuries to patients, and prevent a lengthy and potentially expensive civil case.

QUICK-REPORT

AFTER TIGERS AT THE BRONX ZOO, PET CATS , AND A GERMAN SHEPHERD IN NEW YORK TESTED POSITIVE FOR SARS-COV-2, THE VETERINARY COMMUNITY BEGAN SEARCHING FOR MORE INFORMATION ABOUT HOW THE VIRUS COULD BE TRANSMITTED THROUGH HUMAN-ANIMAL CONTACT. AS A RESULT OF THAT SEARCH, TUFTS UNIVERSITY CUMMINGS SCHOOL OF VETERINARY MEDICINE BEGAN A STUDY TO FIND OUT WHAT THEY COULD ABOUT HUMAN-ANIMAL TRANSMISSION IN A SEMI-DOMESTIC SITUATION. BOTH COMPANION AND LARGE ANIMALS WERE SCREENED DURING THE FIRST PHASE OF TESTING AND SUBJECTS WERE CHOSEN IRRESPECTIVE OF COVID-19 STATUS OF THE OWNERS. CURRENTLY, IN PHASE 2, THE TEAM IS SCREENING AND MONITORING PAIRED OWNERS AND ANIMALS TO EVALUATE POSSIBLE TRANSMISSION AND TRY TO IDENTIFY HIGH RISK SITUATIONS. IN THE THIRD PHASE, MONITORING OF FARM AND VETERINARY SCHOOL ANIMALS WHO HAVE REGULAR CONTACT WITH HUMANS WILL TAKE PLACE TO SEE IF THERE IS TRANSMISSION FROM THIS TYPE OF CONTACT OVER THE COURSE OF PANDEMIC. THE FIRST PATIENT TESTED WAS A HEDGEHOG AND INCLUDED BATS, A COYOTE, AND EVEN SEALS. HOWEVER, THE MAJORITY OF TESTING HAS OCCURRED IN COMPANION ANIMALS. AS MORE INFORMATION ON THIS STUDY BECOMES AVAILABLE, WE WILL PROVIDE AN UPDATE.

ALERT: There have been reports of licensees in other states receiving spoofing calls from people posing as Board Staff. If you receive a suspicious call saying you are under investigation or your license may be suspended hang up and contact our office at 775-688-1788 immediately and we can help make a fraud report.



CE CORNER

Please refer to NAC 638.042 for a complete list of the types of courses approved the Board to ensure that CE you are taking is approved.

- Digital AVMA convention August 20-22, 2020 <https://www.avma.org/events/avma-convention>
- Fetch dvm360 Conference August 26-31, 2020 <https://event.dvm360.com/event/1335e2b7-806e-455f-a5a6-3117f650d148?5S,M3,1335e2b7-806e-455f-a5a6-3117f650d148=>
- Free AVMA seminars online: <https://axon.avma.org/page/covid19-courses>
- Atdove.com is hosting a free 1 hour course on Leptospirosis on August 20, 2020. You can click the link to register: https://us02web.zoom.us/webinar/register/WN_ypYm20yVQJiAVFNrmPzzxA
- VetFolio is offering free CE here: https://www.vetfolio.com/learn/article/free-ce-from-vetfolio?gclid=Cj0KCQjwJv4BRcCrARIsAB17JI4ejCJgAqebu0UQV--7VZSp_-Eh_1DI9kdVhi8Ncg8k2MURexlMOOaAvegEALw_wcB
- A free 1 hour CE course from CEVA Animal Health is being offered here: <https://www.cevaconnect.com/ce/r027/>
- Search for Board approved CE any time at <https://www.aavsb.org/RACE>