

University of Idaho

Animal Care and Use Committee

Standard Operating Procedure (SOP)

Title: Preparation of a Mammal for Surgery

Species: Mammals

Last Updated: March 1, 2006

Purpose

An aseptic surgical field is essential to preventing intra-operative contamination and sepsis. Sepsis, whether localized or general, may lead to altered immune modulators, inflammation, and a number of other possibilities including death.

Potential Impact on Animal Subjects

Ill or otherwise physiologically compromised animals may be at risk of anesthetic complications. If proper patient selection and adequate care when clipping and scrubbing are utilized, no adverse effects are expected to occur in most animals. Rarely, an animal may develop self-limiting contact sensitivity to one or more surgical scrubs or disinfectants with repeated use. Inappropriate use of hair clippers or excessive scrubbing may result in skin irritation or lacerations.

Description

The surgical patient and site on the patient is identified. Initial preparation is performed in the animal induction area. Anesthetic induction occurs prior to preparation of the surgical site, after, or a combination of the two depending on the species and surgical site used. Depending on the status of the patient, the length of the procedure, the type of procedure being performed, and the type of anesthetic used (local vs. general), an intravenous catheter and fluids should be started for emergency access during surgery.

All hair originating in and protruding into the surgical field is trimmed. The area clipped is sufficient to prevent contamination of the surgeon, surgical instruments, suture material, internal tissues of the animal, and allow for expansion of the anticipated surgical site in case of emergency. Clippers are moved in the direction of hair growth with the blade flat against the animal to decrease skin irritation and the risk of cuts. A number 40 clipper blade or higher is used. Carefully cutting against the grain of the hair coat along the incision line or shaving the incision line with a razor provides a smooth surface that will not interfere with wound closure. All loose hair is removed by hand, with a vacuum cleaner, or both.

The prepared area is washed with germicidal soap and water until all visible dirt is removed. General lathering and rinsing are more important than the bactericidal effect of the cleansing materials. At a minimum, a series of three scrubs are made, starting at the surgical site and moving in an outward, circular direction to drag potential contaminants away from the surgical site. A clean scrubbing device (surgical scrub sponge/brush, gauze pad, etc.) is used for each scrub. Each scrub is followed by wiping the site clean with sterile gauze or cloth in the same inward to outward path.

The animal is moved to the clean surgery area and adhered to the surgical table or otherwise restrained. The surgery room and table should be adequately insulated to meet the physiologic needs of the species and size of animal being used. The animal is positioned to make the surgical site easily

accessible. Any monitoring equipment used during the surgery is positioned and applied. A final scrub is applied to the surgical site. Sterile drapes are applied around the surgery site using aseptic technique. Towel clamps are applied to the surrounding tissue if needed to hold the drape(s) in place.

References

Canine Surgery. J. Archibald. American Veterinary Publications, Inc. Drawer KK, Santa Barbara, California.