

SURGICAL SITE INFECTION IN CLEAN AND CLEAN CONTAMINATED PROCEDURES IN VETERINARY PRACTICE – A MULTICENTRE STUDY OF PERIOPERATIVE PRACTICES IN PORTUGAL

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Background

- ♦ A surgical site infection (SSI) is a healthcare associated infection occurring at or near the site of surgery, up to 30 days after surgery, or up to one year if implants have been left in place.
- ♦ Perioperative parenteral antimicrobial medications is a well established approach to prevent SSIs; For animals undergoing most clean or clean contaminated surgical procedures (C/CCS), prophylactic use of antimicrobial drugs is thought unnecessary.
- ♦ There are little evidence-based guidelines for the use of perioperative antimicrobials in small animal surgery. There is little evidence in the veterinary literature on which to base decisions regarding the length of time antimicrobial administration should be extended to warrant an effective prophylaxis.

Main objectives

The goal of this prospective study was to acknowledge current practices in the perioperative period within eight small animal practices in Portugal, while attempting to relate the administration of prophylactic antimicrobials with SSI in clean or clean contaminated soft tissue surgical procedures.

Materials and Methods

- ♦ Multicentre prospective study in 8 practices
- ♦ Nationwide representativity
- ♦ Five veterinary hospitals and three small animal practices.
- ♦ The study's design and methodology is represented in figure 1.

Criteria for inclusion of cases:

- ♦ Twenty consecutive soft tissue surgical procedures; C/CCS;
- ♦ ASA 1 and ASA 2 patients.

Written responses on a self-administered questionnaire to be filled for each surgical procedure focusing on...

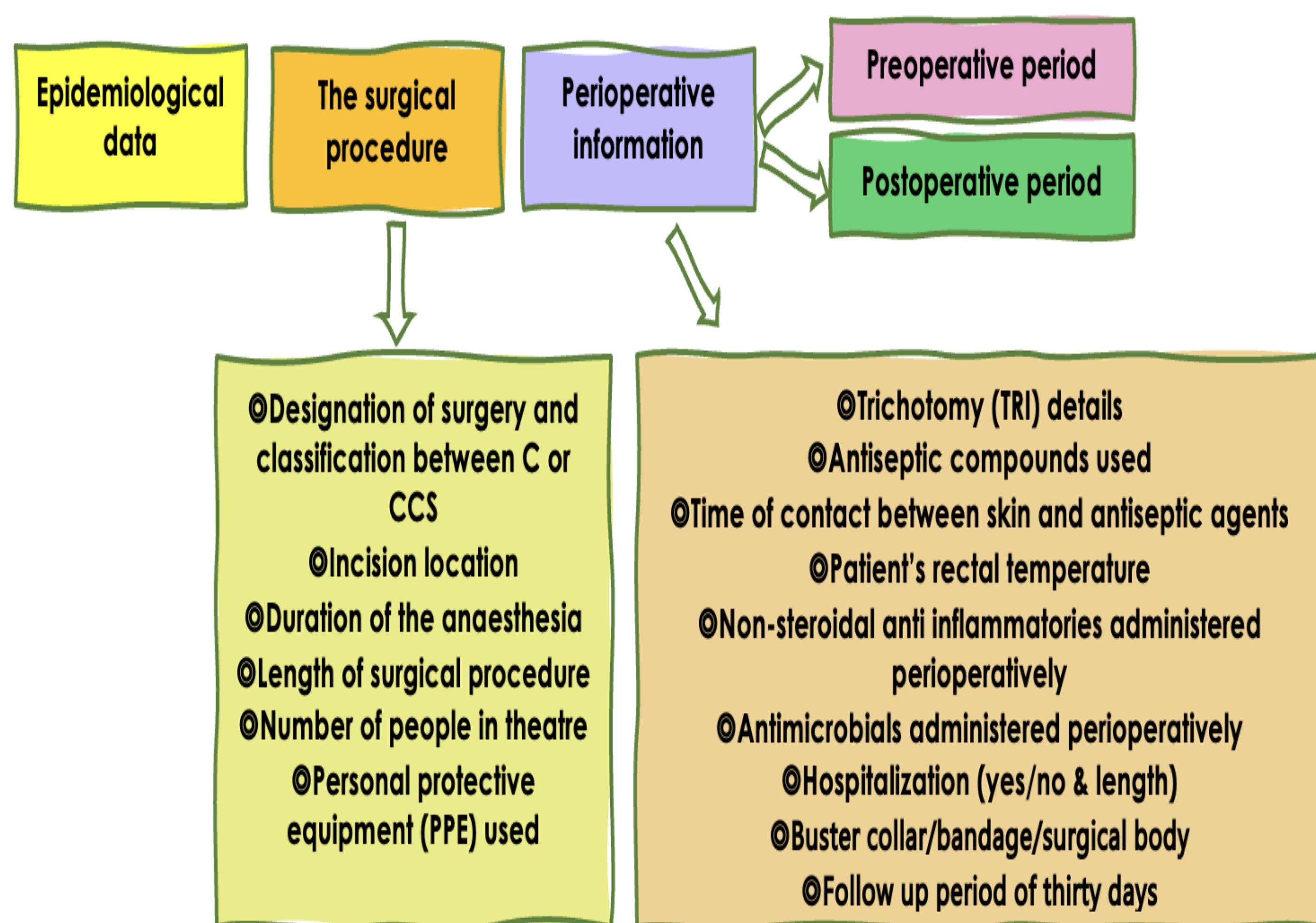


Figure 1. Schematic representation of the study's design and methodology

Results

- ♦ **149** valid questionnaires (fig.2)
- ♦ Most surgeons (**98%**) replied they had adhered to Halsted principles throughout each surgical procedure.
- ♦ Regarding personal protective equipment (PPE), **63.6%** of individuals wore hat, mask, gown and gloves, **22.2%** reduced their PPE to the use of hat, mask and gloves and **12.3%** wore only gloves and mask. A minority reported the use of gloves or gloves or gown on its own.

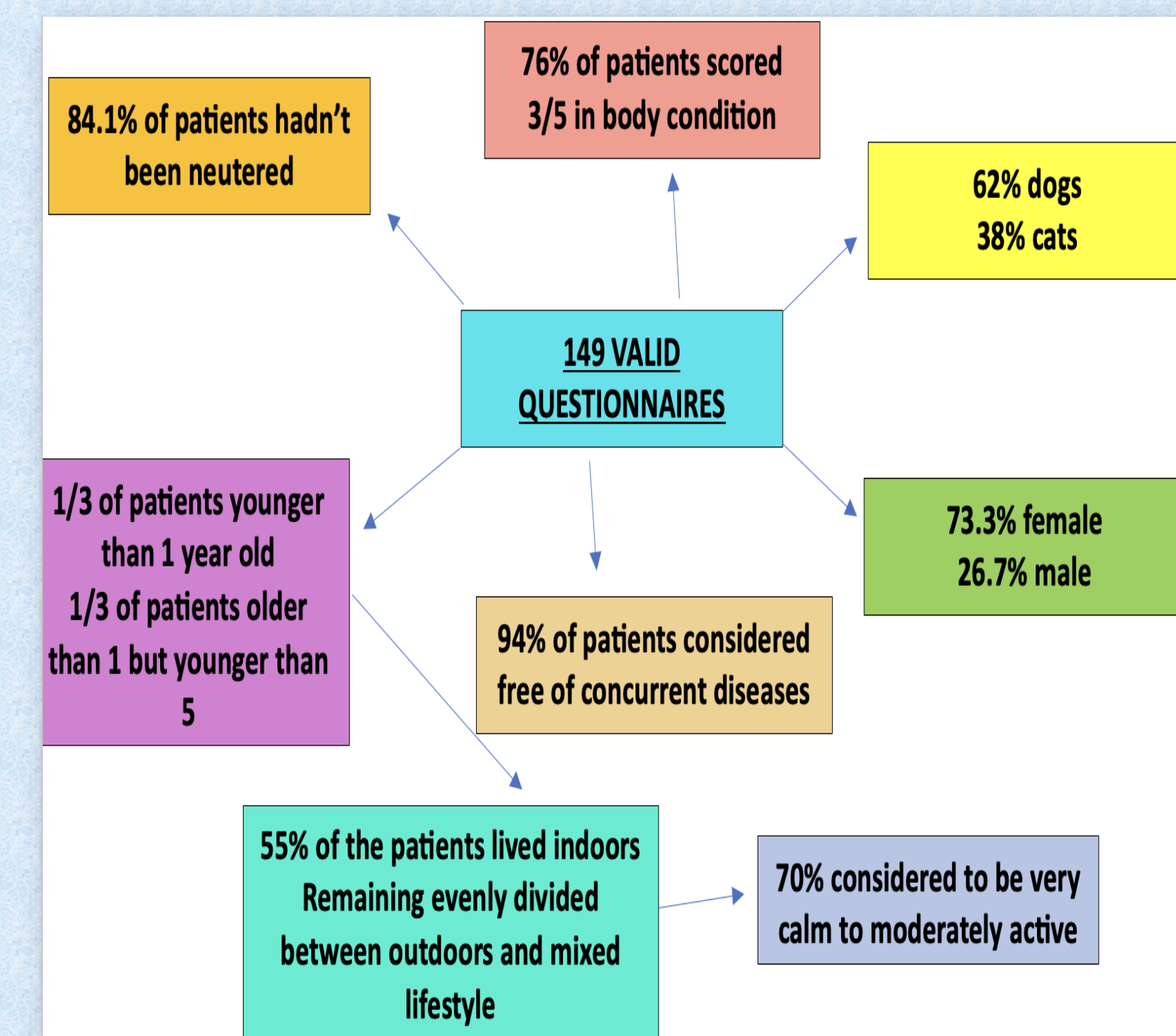


Figure 2. Surgical patients characteristics

Surgical procedure

Nearly ¾ of the of the registered surgeries were meant to neuter the pet. Female spay accounted for 55% of cases; 91% of surgeries considered clean and the remaining clean-contaminated.

Approximately 82% of the surgeries lasted for 60 minutes or less. In regards to the anesthetic, nearly 18% of the procedures reached or overtook the 90 minute mark.

In 20% of cases there were more than one surgeon performing the procedure and there were 3 or more individuals present in theatre in 17.6% of cases.

Whenever suture was required, surgeons elected monofilament material.

Perioperative period (pre and post-operatively)

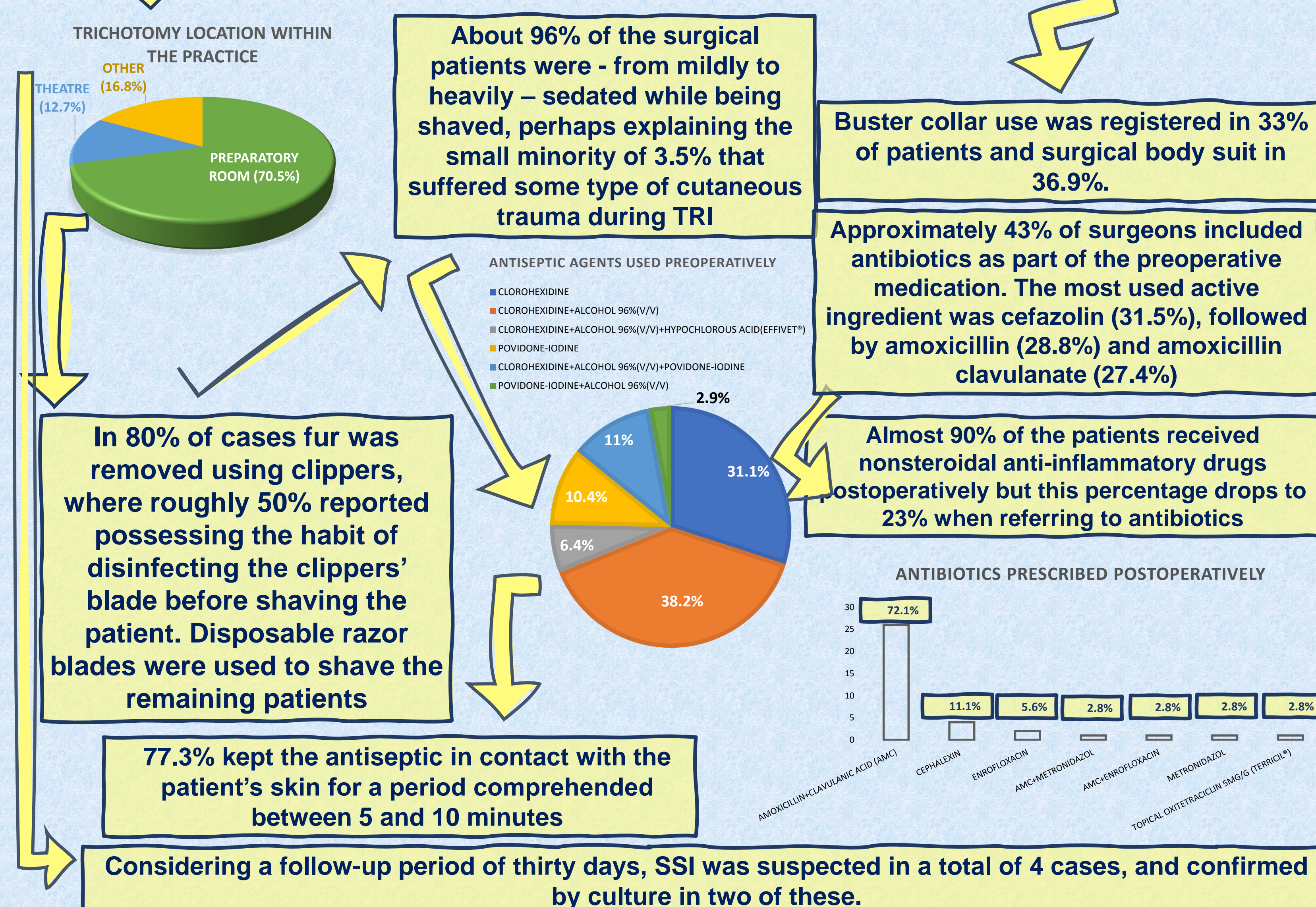


Figure 3. Schematic representation of the veterinarians' attitudes and protocols in place within the surgical field

Conclusions

- This multicentric study has provided the first data on Portuguese veterinary surgeons' attitudes and protocols within the surgical field.
- Most veterinary surgeons kept the number of people in theatre limited, except for a veterinary teaching hospital, which might have influenced the results
- A great discrepancy between cases was recorded even within the same practice, regarding the length antiseptics contact with the patient's skin.
- Neither the type of surgery nor surgical length or number of people present in theatre seemed to have determined prophylactic antibiotic administration.
- Amoxicillin and amoxicillin clavulanate were the most frequently prescribed antibiotics either pre and postoperatively.
- An Evidence-based and standardized protocol should be implemented to avoid the heterogeneity of practices, and as major step towards improved antimicrobial stewardship in companion animal surgery.