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VIDEO LAPAROSCOPIC OVARIOHYSTERECTOMY AS A SURGICAL TECHNIQUE FOR REPRODUCTIVE STERILIZATION

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INTRODUCTION

Videolaparoscopy or laparoscopy is a minimally invasive surgical method that was introduced in 1901 and has been expanding every year, whether for diagnostic, therapeutic or elective purposes.⁶ Ovariosalpingohysterectomy (OSH) is the most frequently performed surgical procedure in dogs and cats and elective sterilization is its most common indication.⁵ The traditional OSH technique involves removing the ovaries and uterus by direct visualization through a median celiotomy. Among the techniques used to perform OSH, videolaparoscopy stands out. In addition to minimizing surgical trauma, it offers advantages such as a reduced recovery period, reduced post-operative discomfort, minimal bleeding, reduced post-operative pain, reduced formation of adhesions and a better aesthetic appearance of the surgical wound.³ The benefits expand when there is a need more delicate inspection of the abdominal cavity, in the face of suspicion of a condition concomitant with the indication for sterilization.⁴

CASE REPORT AND DISCUSSION

On April 14, 2023, a 2-year-old, 8-month-old young adult female cat of no defined breed was seen, presenting with a history of an increase in volume in the right caudal abdomen since she was 30 days old, with no symptoms. The patient showed intolerant behavior towards other cats in the family, erratic elimination and suspected pseudocyesis associated with the heat period. On ultrasound examinations, discreet alterations in bilateral renal morphology were identified. As a result, pre-surgical examinations were carried out and the patient was renally staged and remained stable, classified as a grade I/II chronic kidney disease patient. Therefore, with the aim of causing less surgical trauma and an improved view of the anatomy of the abdominal cavity, a laparoscopic procedure was performed to as-

sess the abdominal muscles, renal architecture and OSH.

The surgery began with the animal in dorsal decubitus. A small incision was made in the region of the umbilical scar and the first access portal to the abdominal cavity was inserted (trocar - 5mm). After access, the abdomen was insufflated with 6mmHg pneumoperitoneum and the video system was introduced. At the beginning of the abdominal exploration, it was possible to see a large amount of adipose tissue adhered to the right caudal abdominal wall (**figure 1**), which extends to the right inguinal canal, with displacement to the subcutaneous region, due to the thinning of the abdominal muscles, suggesting fragility/discontinuity (hernia/malformation). It was decided not to divulge the fatty tissue in order to minimize the risk of complications. During the procedure, a second small incision was made and the second trocar was placed - 5mm cranial to the bladder region. Temporary fixation of the ovary and uterine horn and sealing of the ovarian vascular plexus (**figure 2**) were performed using a bipolar scalpel/electrocautery. The same procedure was used on the opposite ovarian structures. After cauterization of the uterine arteries and veins (**figure 3**) and complete sectioning of the uterus, a new abdominal inspection was carried to confirm the absence of bleeding and, after removal of the portals, the abdominal CO₂ was emptied and the muscle layer, subcutaneous tissue and skin were cut using 4-0 monocril thread.⁴ Minimal size of the surgical wound and immediate post-operative period with the patient eating comfortably.⁴ Positive behavioral results in relation to contacts after returning to family life.^{4,1}

According to Carvalho et al. (2007), the elective surgical sterilization of female dogs and cats is one of the most commonly performed procedures in veterinary practice due to its potential benefits such as population con-

trol, prevention of reproductive tract diseases, mitigation of undesirable behaviors associated with hormonal activity and population reduction and even the recovery of these animals.²

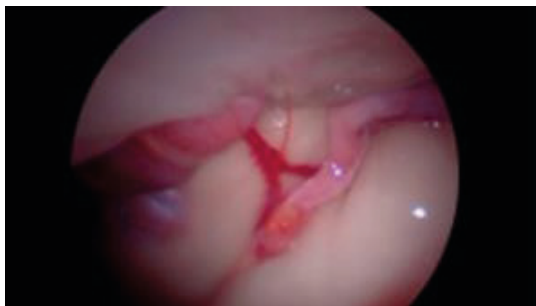


Figure 1: Trans-surgical photograph showing adipose tissue adhered to the abdominal wall.

Source: personal archive

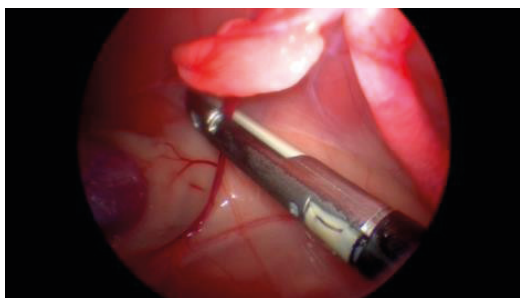


Figure 2: Trans-surgical photograph of the use of bipolar electrocautery to seal the arterio-venous complex.

Source: personal archive

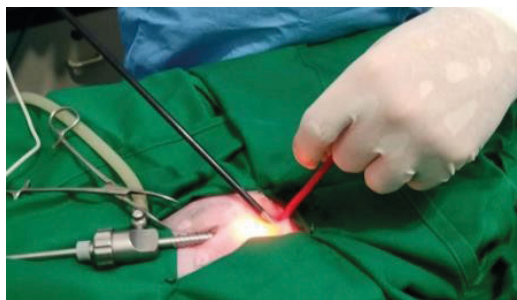


Figure 3: Trans-surgical photograph of the use of bipolar electrocautery to seal the arterio-venous complex of the right uterine horn.

Source: personal archive

FINAL CONSIDERATIONS

In view of the above, it can be concluded that OSH is an essential procedure for population control, to avoid various pathologies and causes the animal's immediate reproductive incapacity. The technique of ovariosalpingohysterectomy by videolaparoscopy proved to be viable because it is minimally invasive and causes less surgical trauma. This shows a great advantage over the conventional method, since the patient will have less trauma to the intervened tissues, less pain in the region, a shorter transoperative time and a quicker recovery so that they can return to their normal activities.

REFERENCES

