Radioactive Cats: When Is It Safe to Go Home?

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Radioiodine (^{131}I) is an established safe and effective treatment for feline hyperthyroidism, one of the most common endocrine diseases of older cats. Post ^{131}I administration, cats and their waste are radioactive and pose a risk to humans. Urine-soaked litter and feces were collected posttreatment from 30 cats over a 24-hour period q7d for 4 weeks. Twelve cats received 120 MBq doses, 10 received 150 MBq, and 8 received 200 Mbq. Over the first 3 weeks, there was significant decrease of ^{131}I in the urine and feces. The study found that the amount of radioactive material present after 2 weeks of treatment with a radioiodine dose of 100–200 MBq was classified as *low level waste* and could be disposed of in normal containers. However, small amounts of radiation were still present in the urine, in the feces, and on the cat for ≥2 weeks after this time, necessitating normal handling precautions. High-risk individuals may elect to avoid exposure during this time.

Commentary

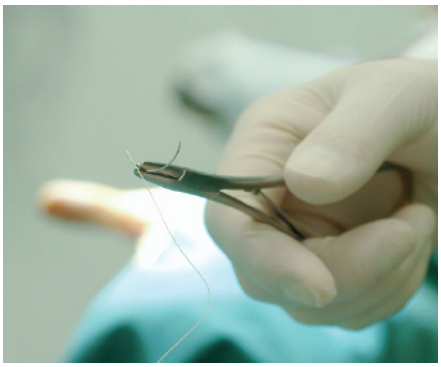
Although ^{131}I is mainly excreted via the kidneys, there is a significant amount present in feces. This report helped support the need to isolate patients for some time after treatment; however, the isolation period during hospitalization may be significantly shorter than previously thought. Often, cats are released 2–4 days after treatment and then managed at home, with time and distance being the most important variables.

This study revealed that radioactivity does not rely on dose but time; a higher dose does not correlate to longer hospitalization. Therefore, owners should be able to care for cats posttreatment without concern about radioactivity causing harm in and around the home environment.—*Vincent Ziglioli, DVM*

Source

Measurement of the radioactivity of iodine in the excreta of cats treated with iodine-131 for hyperthyroidism. Lamb V, Gray J, Parkin T, Ramsey I. *VET REC* 172:45, 2013.

Ligation After Ovariohysterectomy: What Is Best?



Hemorrhage is a common complication of canine ovariohysterectomy. Pedicle ligation is performed to achieve vessel occlusion; success depends on suture material, ligation technique, number of ligatures, and preligation manipulation of the pedicle. This in vitro study investigated the difference in ligature strength in an ovarian pedicle vascular model. Using size USP 0 monofilament polyglyconate and braided multifilament polyglactin 910, 5 knots were compared: single square knot, single surgeon's knot, single slip knot, modified transfixing knot, and single-double other side (SDOS) knot.

The first 3 knots were characterized by an encircling ligature tied to 1 side of the pedicle, while the modified transfixing and SDOS ligatures were tied on both sides of the pedicle. Although the square knot is recommended for vessel ligation, the modified transfixing ligature, slip knot, and SDOS knot outperformed it. The square knot may have performed poorly because of the bulk and characteristics of the polyester material used in the vascular model; the security of this ligature requires no slippage between the first and second throw. Slippage can occur if there is more expansive force (from bulk) than frictional force of the first throw. The monofilament outperformed the braided polyglactin 910 material, possibly because coating applied to many multifilament suture threads reduces tissue drag.

Commentary

Anecdotally, knots that encircle the pedicle twice or incorporate a knot on each side of the pedicle are superior to a simple square ligature when fat obscures the pedicle. In high volume spay/neuter clinics located in remote areas, a form of the Miller's knot is common, as ovariohysterectomy candidates are often mature, overweight, pregnant, and/or have uterine disease. Although this study did not involve live animals, the findings supported the use of bilateral ligature techniques, and these options should be considered in private practice, especially for a larger patient.—*Heather Troyer, DVM, DABVP, CVA*

Source

Pedicle ligation in ovariohysterectomy: An in vitro study of ligation techniques. Leitch BJ, Bray JP, Kim NJG, et al. *J SMALL ANIM PRACT* 53:592-598, 2012.