Feline Injection Site Sarcomas

Feline injection site sarcomas were only recently recognized in the last few years. They arise most often at the site of previous vaccinations, but any injection can potentially cause these. While some owners fear these tumors enough to not vaccinate, this is not something we recommend. The diseases routine vaccinations prevent are often lethal. However, we do recommend judicious use of vaccines. This means that they should be given in sites as low on the legs as possible and they should only be given as often as needed for them to be effective. This is something that can be discussed with your veterinarian.

The rate of development of these tumors is reported to be approximately 1 to 4 in 10,000 vaccinated cats. While most are diagnosed as fibrosarcomas, it is important to note that chondrosarcomas, malignant fibrous histiocytomas, rhabdomyosarcomas, osteosarcomas, myxosarcomas, and other types can be diagnosed at injection sites as well.

Feline injection site sarcomas (FISS) appear more aggressive on biopsy. They often invade muscle, and their cells tend to have a more irregular and aggressive appearance under the microscope. They tend to spread to distant sites approximately 25% of the time. The lungs are the most common site followed by the draining lymph nodes and abdominal organs.

Sometimes, fibromas (benign lesions) occur at a vaccine site. However, if a lump forms and continues to grow after one month, grows larger than 2 cm (about 0.8 inches) in diameter, or persists for longer than 3 months, it should be evaluated and removed. Fine needle aspirate and cytology are usually first tried to obtain a diagnosis. This is because this is least invasive. However, sometimes a diagnosis is still not obtained. In this situation, biopsy is recommended.

Prior to definitive treatment, 3-view chest x-rays, blood work, urinalysis, and a CT scan of the tumor site are often recommended. The CT scan is to better evaluate the tumor margins and is recommended on a case-by-case basis.

Surgery is usually the first option for treatment. It should be performed by a board-certified surgeon. Up to 70% of these tumors recur after surgery, so the more aggressive the removal and surgery, the less likely the chance of tumor re-growth. One study showed that tumors recurred about 2 months after surgery with less aggressive treatment and a year
or more with more aggressive treatment. For tumors that have been completely removed or adequately treated, the disease-free time period in which there is no evidence of regrowth or spread is over 700 days. Often, radiation is additionally recommended prior to or after surgery. This is to reduce the risk of tumor re-growth at the site.

Chemotherapy is sometimes recommended for these masses, though it is rarely if ever recommended as the primary treatment option. This is something that should be discussed with a board-certified veterinary oncologist and considered on a case-by-case basis. In general, early detection and treatment are key. There is the potential for long term survival when tumors are caught early and treated aggressively.