CUTEREBRA DO INFEST SUGAR GLIDERS

Douglas S Pernikoff, MBA, DVM

OVERVIEW: Anecdotal reports of bot fly infestations have surfaced involving pet sugar gliders, but have not yet been substantiated. In this brief summary a 9 month old, female sugar glider was presented with a hole in the mid-abdominal wall just caudo-ventral to the glider's pouch. There was suggestion of penetration of the hole into the true abdominal wall with a structure presumed to be bowel loop, barely visible. Trauma was considered a likely etiology for the physical lesion.

PROCEDURE: The glider was anesthetized with isoflurane gas anesthetic in a small chamber device. The area was shaved and surgically prepped. The 'hole' in the epidermis and subcutaneous tissues was extended for improved visualization. Closer examination noted what appeared to be a moving proboscis or mouth parts and immediately the presence of a cuterebra larva was apparent. Firm pressure behind the SQ mass, that extended just craniad to the pouch and rolled latero-caudal, encouraged the expression of a full cuterebra larva. After removing the larva, the SQ space was explored to be sure the muscular abdominal wall was not penetrated. The space was then flushed repeatedly with sterile saline. The subcutaneous tissues were closed with 3-0 vicryl in a continuous fashion and the skin was closed with 2-0 ethilon, interrupted sutures. The glider was sent home with amoxidrops, dosed at 5mg/# of body weight, bid, for 10 days. No collar was provided. The owners were from Daton, Ohio, on vacation in St. Louis, Mo. The specific bot fly species was not identified in this case.

A follow up examination within 48 hours showed that the glider had left the site alone and the tissue was healing well.   Sutures are scheduled to be removed within 10 days of placement.

CUTEREBRA INFESTATION IN SMALL MAMMALS: The rodent or rabbit bot fly, *Cuterebra spp* (order Diptera, family Cuterebridae), are considered opportunistic, parasitic infestations of dogs, cats and ferrets. The rabbit bot fly is less host-specific and more commonly afflict dogs and cats.   Other potential species may include *Dermatobia homonis* or various *Hypoderma spp.,* particularly for animals kept outside.

CUTEREBRA LIFECYCLE OVERVIEW: Adult female cuterebra flies look similar to large, bees that do not feed or bite. Rather, the female fly deposits 5-15 eggs into and around the nesting or burrows. In contact with the mammalian host body heat, the larvae hatch and enter the host mouth or nares as the host grooms itself. Larvae then migrate through the SQ space (often species specific SQ sites), develop and rupture the skin to provide a breathing pore. Approximately 30 days later the larvae exit the skin and fall to the ground to pupate on their way to complete cycle development into an adult fly. The full cycle time depends on environmental conditions like heat and humidity.   Most infestations occur mid-summer through early fall.

CLINICAL CONSIDERATIONS: The typical presentation in most mammal hosts is a swelling, with or without pus exuding through the hole structure (breathing pore).   In removing the larva, it is important not to rupture it, as this creates acute inflammation and recurring abscessation. In less common instances, the migrating larvae can take aberrant paths and cause unusual infections in those unusual sites like the central nervous system or elsewhere.

SUMMARY: Although rarely reported, Cuterebraediasis can afflict sugar gliders. Presuming that these are not typical hosts for these flys in North America, one might expect to see the cuterebra larvae migrate and house themselves in unusual sites within the sugar glider body. Otherwise, the life cycle and evidence of a swelling and associated breathing pore hole should encourage the glider owner or glider veterinarian to look for, and manage cuterebra infestations appropriately.

Questions can be delivered to Dr. Doug Pernikoff, @ dpernikoff@gmail.com, or call the clinic at 314-761-8583

Clarkson-Wilson Veterinary Clinic   636-530-1808   636-530-1352 fax