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CHAPTER **69**

Clinical Management of Large-Scale Cruelty Cases

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INTRODUCTION

Large-scale feline cruelty cases typically arise from investigations involving individual hoarders, rescue organizations, sanctuaries, or breeders. These cases involve the crime scene, animal processing at the scene and temporary shelter, animal removal and transport, sheltering, and final animal disposition. The veterinarian plays a role in the planning of the operation, at the crime scene, the temporary shelter, and the hospital receiving cats for more advanced treatment. The clinical management of these cases is different from traditional shelter medicine or feline practice. To act and respond appropriately, the veterinarian must have an understanding of all aspects of the operation. These are legal cases requiring certain types of documentation and procedures. The organization of the entire operation should be conducted similar to disaster response using the Incident Command Systemwhere the medical management on scene and at the temporary shelter is incorporated into this reporting structure with direct communication to the lead investigator.¹ Extensive planning is needed, anticipating the number of cats, age ranges, known or likely medical issues, and socialization status. Decisions must be made considering practicality, stress on the animals, costs, resources, future animal placement, and any legal impact. The goal is a successful outcome for the individual cat and the criminal case.

Supplies

Supplies needed for on-scene and shelter medical operations need to be planned very early in the investigation. All team leaders should be involved in this planning, including those from the medical, forensic evidence, and shelter branches, with a supply list compiled for each branch (Table 69-1). Arrangements should be made to obtain supplies during the case response for items that were not anticipated or depleted due to use.

Color Code System

The use of color codes is important for large-scale cases to implement a visual system of communication at the scene, from scene to the shelter, within the shelter, and for forensic examinations. The colors are used to designate triage categories, initial cat temperament, and other conditions that determine placement and housing within the shelter. In addition, this system serves to establish the examination sequence. The assignment of color categories may vary with each case based on the availability of the color devices used (Table 69-2). Colored duct tape is easily used and readily purchased at home improvement, hardware, office supply, and general merchandise stores. Colored flagging tape may also be used but poses a risk of animal ingestion and can be difficult to remove from transport carriers or cages. A piece of the appropriate colored duct tape is placed on the animal identification (ID) label located on the transport carrier or cage; some animals may have more than one color assigned (Figure 69-1). The primary use of the color system is at the scene, but some colors may continue to be used within the sheltering system. The color system and their assigned categories should be posted at the scene, within each forensic examination area, and at multiple areas within the shelter.

VETERINARY MEDICAL TEAMS

Critical Triage Team

The purpose of the critical triage team, comprised of veterinarians with or without veterinary technicians, is to identify any animals in need of urgent care. The critical triage team assesses animals after the initial scene walk-through is complete and as the physical evidence, animal ID, and animal removal teams begin their work. Any critically ill or injured animals should have priority for ID assignment and removal from the scene. Provisions for an on-site critical examination area should be made, such as a mobile veterinary clinic, trailer, tent, or one of the buildings within the scene itself. Cats requiring more extensive diagnostics or treatment should be transported to a local veterinary hospital.

Forensic Examination Teams

The forensic examination teams are responsible for examination of all the animals. These teams are comprised of a veterinarian, scribe, and animal handler. It is important that all animals are examined in a timely fashion, within 72 hours, to ensure the examination evidence is representative of the

Medical Supplies	Quantity	Check
Examinations		
Alcohol		
Animal shampoo		
Antibiotics—injectable, ophthalmic, oral, topical		
Bandage scissors		
Bath mats for examination table surface		
Blood collection tubes—lavender top, serum separator		
Body warming equipment		
Canine nail trimmers		
Canned cat food		
Centrifuge for blood/urine/fecal samples		
Clipper blade cleaner, cooling spray		
Controlled drug log		
Cordless clippers		
Cotton balls		
Cotton tip applicators		
Dewormer medications (roundworms, hookworms, tapeworms, Coccidia, Giardia)		
Digital thermometers		
Ear cleaner		
Euthanasia solution		
Examination forms and diagram		
Examination gowns		
Eye wash solution		
Fecal loops		
Fecal sample cups		
Fecal solution for centrifugation		
Fecal tubes with plastic caps for centrifuge		
Feline nail trimmers		
Feliway spray		
Flea treatment—oral, topical		
Fluids 1 L for subcutaneous administration (e.g., lactated Ringer's solution)		
Fluorescein stain		
Frosted microscope slides		
Gloves—small, medium, large—nitrile only		
Glucometer licensed for animal use		
Grooming tools-dematting comb, brush, flea comb		
Hematocrit centrifuge machine, tubes, clay, reader		
Immersion oil		
Intravenous catheters (22-, 25-, and 18-gauge)		

Table 69-1 Large-Scale Cruelty Case Medical Supply List—cont'd		
Medical Supplies	Quantity	Check
Intravenous lines (72-inch)—for subcutaneous fluid administration, 10 to 15 drops/mL		
Lubricating jelly		
Laboratory forms		
Laboratory test log		
Microscope		
Microscope cover slips		
Milk replacer for kittens		
Necropsy equipment		
Ophthalmoscope and otoscope		
Patient-side test kits (feline leukemia virus, feline immunodeficiency virus, parvovirus)		
Protective coverings for sleeves		
Rabies vaccination certificates		
Sedatives and reversal agents		
Stethoscopes		
Surgical blades for skin scrapings		
Towels		
Universal microchip scanner		
Urine chemistry sticks		
Urine centrifugation tubes		
Vaccines		
Weigh scales		
Animal First Aid		
Burn relief gel pack		
Bandage scissors		
Bandaging materials		
Chlorhexidine scrub		
Chlorhexidine solution		
Cotton roll		
Dextrose 50% injectable		
Forceps		
Hemostats		
Hydrogen peroxide, 3%		
Nonadhesive pads		
Porous tape		
Scalpel blade holder		
Suture materials		
Vitamin B injectable		

Table 69-1 Large-Scale Cruelty Case Medical Supply List—cont'd		
Medical Supplies	Quantity	Check
Crash Cart List		
22-, 25-, and 18-gauge catheters		
Allergic reaction medications		
Cardiac arrest medications		
Endotracheal tubes		
Laryngoscope		
High-calorie nutritional supplement		
Shock medications		
Needles and Syringes		
18-gauge needles		
1-mL syringes with 25-gauge needles		
1-mL syringes without needles		
22-gauge needles		
25-mL syringes without needles		
3-mL syringes with 22-gauge needles		
3-mL syringes with 25-gauge needles		
3-mL syringes without needles for oral medications		
3-mL syringes without needles for injectable medications		
6-mL syringes without needles		

Table 69-2	Color Code System		
Color	Indication	Notes	
Red	Bite case	Has bitten a human	
Yellow	Handle with caution	Exhibited shyness, fear, or aggression; intended for handlers to be cautious, especially at shelter intake	
Pink	Pregnant	Suspected at the scene or confirmed on examination	
Green	Infectious	Suspected at the scene or confirmed on examination	
Blue	Priority examination	As determined by the forensic examination teams	
Orange	First general examination	Examined after blue priority examinations are complete	
Black	Emergency	To be transported to off-site veterinary facility	



Figure 69-1: Yellow, blue, and green flagging tapes are attached to each carrier to designate initial animal triage categories.

animal's condition at the original scene and any health issues are addressed as quickly as possible. The examination and treatment process should be complete and efficient. These teams usually work best when the scribe, who must be familiar with medical terminology, fills out the examination form as the veterinarian dictates the findings. The creation of special laboratory and treatment teams can improve efficiency and free the veterinarian to focus on examination and documentation. It is preferable to have one team designated to examine the more severe medical cases and animals that may require sedation to handle. This team should have ample medical supplies, controlled drugs, and the most secure examination area.

CRIME SCENE EVALUATION

There are several assessments that must be made at the crime scene that directly impact handling of the cats throughout the operation and have important legal ramifications. These evaluations may be conducted by veterinarians along with case investigators. It is critical that the veterinary teams, offsite hospitals, and sheltering operations take this into consideration. The assessment should include information about the cats and current housing conditions along with medications and supplies present. The most important consideration, and most overlooked, is the evaluation and continuous monitoring of stressors on the cats.

It is important to document any obvious medical, husbandry, or behavioral care needs at the scene. This includes the presence of neonates, nursing queens, chronic medical conditions, infectious diseases, and potential zoonotic diseases. Any records present should be assessed for pertinent information, including intake date, medical history, and individual cat names. Any medications, supplies, and supplements should be documented, noting any prescriptions for individual cats, the date prescribed, expiration dates, the original amount and quantity remaining, and the prescribing veterinarian's information. The medications and supplies should be assessed for indicators of current or past medical issues.

The general housing of the cats should be assessed and documented with photography and mapping. This assessment is an important consideration for housing decisions at the sheltering site. Special note should be taken of the number of cats in a room or cage and natural groupings or obvious social bonds. The flow of people and animals within and between housing areas should be documented, with special focus on the potential for fomite transmission of pathogens. The type and brand of food offered should be recorded as well as the number of feeding stations and the number of cats that have access to each one. The availability and potability of water sources should be assessed. The litter boxes should be evaluated, including the type of litter, the amount of urine and feces, the type of litter box, and the number of cats with access to each litter box. Samples of diarrhea should be taken for individual cats and representative samples for group housing situations. Any unsanitary living conditions should be noted and consideration given to the effects of such conditions on the respiratory tracts, eyes, fur, and skin of the cats.

SCENE RESPONSE

Stress Management

The effect of stress on cats has been well documented.² In large-scale cases, stress can come from crowding, prolonged confinement, isolation, lack of environmental enrichment, an unsanitary environment, poor food and water resources, and untreated medical conditions. Every consideration should be made to minimize stress during removal, transport, sheltering, and examination of the cats. Physical handling of the cats and change of environment are additional but necessary stressors in these cases that carry a risk of exacerbating any pre-existing medical conditions. It is not unusual for these large groups of cats to be subclinical disease carriers that have reached a state of homeostasis that when disrupted results in new outbreaks. In addition, many of these cases involve animals that lack proper socialization and/or have been under severe emotional stress. They may exhibit aggression (due to fear or pain), or they may be completely unable to interact. Some cats may exhibit subtle behavioral clues of extreme distress. It is the initial handling at the scene that can set the animal up for success or failure more so than any setbacks that may occur during examination or sheltering.

Resistance to handling and restraint is almost always the result of fear, anxiety, or pain, which is compounded when force is used. If possible, it is preferable to take several hours to remove a cat from the scene rather than forcefully remove it, which can reinforce the animal's fear and behavioral response. It is important to recognize that these cats may have reactions to novel stimuli different from those raised as pets in private homes. Therefore, any negative behavioral designations assigned at the scene should be considered temporary and only for the purpose of cautionary handling. The key to successful handling of animals involves the accurate appraisal of behavior, an adequate number of staff, and the appropriate equipment; proper training in each of these areas being the most important aspect.

Transportation

Transportation of cats from the scene to the sheltering site should be done in such a manner to minimize stress on the animals and to maintain compliance with applicable laws and regulations. Considerations should be given to the environmental conditions and the time required to load the vehicle (which directly affects the first animals loaded). The spacing of the animal transport carriers within the transport unit should be planned to provide adequate ventilation for the cats inside. Individual transport carriers should be of sturdy construction, put together properly to prevent animal escape or injury, have adequate ventilation, and consist of a design that allows stacking of carriers. Special areas may need to be designated at the offloading area for animals requiring immediate veterinary care or assessment upon arrival to the shelter, especially neonates. Planning for animal carrier placement based on infectious disease status is difficult and usually unnecessary as in most cases there has been ongoing exposure among animals due to their living conditions.

Sheltering

For large-scale cat cruelty cases, there is rarely an existing animal shelter that can house all of the animals at one location. This requires creating a temporary shelter, which follows the same principles used for animal disaster sheltering, with the primary difference that the animals are evidence in a criminal case. Protocols must be in place for monitoring, treatment, daily assessment, and progress documentation, including change of medical or behavioral status. There should be a shelter mapping system to identify and track the location of every animal, including when animals are moved. It is important to have the veterinarian's input on the initial design and any adjustments made based on the crime scene assessment or forensic examinations. The shelter should be designed to be flexible based on changing medical or behavioral conditions of the animals. Shelter design should take into account the number of cats, special housing needs, ease of handling, infectious disease, temperature control, airflow, foot traffic, noise levels, animal stress, and environmental enrichment. Continued assessment and reassessment of cat behavior and temperament should be conducted, with changes made to address any issues noted. Any final behavior or temperament designations should only be assigned after the cats have had time to adjust to their new environment and recover from all stressors, which may take several days to weeks.

Consideration should be given to the original housing, grouping, and social bonds of the cats at the scene. Often these cases involve group housing or free-roaming shelter settings, and the temporary shelter results in isolation of cats into individual cages. Although this can be another stressor on the cats, it can be offset (at least for the short term) by the positive change to a sanitary environment and the elimination of competition for resources of space, litter, food, and water. Cats should be paired or group-housed whenever possible and practical to reduce stress. Shy or feral cats are often less stressed when paired with another cat. Wire cages are especially amenable to alteration, creating a "double-wide" space for this purpose. Environmental enrichment is important to incorporate into the sheltering design and protocols. This includes soft bedding, boxes, or small carriers to hide in, toys, treats, and catnip. It is critical to offer canned food, especially for cats with upper respiratory or dental disease, to assess and stimulate appetite, and for further enrichment. It is important to minimize changing of bedding and other items within the cages, which can create additional stress.³ The use of synthetic pheromones (e.g., Feliway, Ceva Animal Health) may be effective in stress reduction when sprayed on bedding and through the use of plug-in diffusers.^{4,5} Whenever possible, the same persons should care for the same cats to help reduce stress, enhance opportunities for socialization, and decrease risk for injuries. Assessments and monitoring may be improved when performed by personnel familiar with individual cats.

Creating separate sections in housing areas should be carefully considered, because they can create more stress on the cats and complicate management of the shelter. These separations are often based on infectious diseases, zoonotic diseases, critical medical observation, bite quarantine, reproductive status, and special needs (such as those cats that are difficult to handle, pregnant, neonates, or nursing). Decisions for separate housing areas must be done with consideration of the crime scene assessment. Most of these cases involve cats that have previously been exposed to each other either through housing design or fomite transmission; therefore, separation based on infectious disease is neither necessary nor recommended. In large open shelters, separate areas can be created by hanging tarps or clear plastic sheets that are open at the ceiling for airflow. Other considerations for housing of cats include lighting, number of separate rooms, secure areas, and airflow. Cats are more stressed when at ground level, so every effort should be made to elevate the housing.³

EXAMINATION, DIAGNOSTICS, AND TREATMENT

In the planning stages, it is important to develop medical protocols, including those for examinations, diagnostic testing, and all treatments. Planning should include what tests will be conducted at the shelter and what outside laboratories will be used. Because this is a legal case, the use of standard examination forms that are developed specifically for these types of cases is recommended (Box 69-1). These forms should be structured to prompt and guide the veterinarian through a complete examination.

Examination of the Cat

Photographic ID of the cat can be performed by one of the forensic examination team members, or a separate floating photographer may support multiple examination teams. The photographs should begin with the case information, including the case number, date, and animal ID written on a card or dry erase board. This first picture with the case and animal information may be taken with or without the animal in the photo, and all photographs following this initial picture should only be of that animal. General photos should be taken showing the entire body of the cat: right and left sides, front (facial), hind (rear), dorsal, and ventral (if possible or appropriate) views. Photographs, with and without a photo scale, should be taken of any obvious lesions, abnormal physical findings, and any evidence found on the body.⁶

It is important that each veterinarian use the same examination form (see Box 69-1). It is the responsibility of the scribe to ensure that the entire form is complete, and it is the veterinarian's responsibility to review it for accuracy. In

BOX 69-1 Live Animal Examination Form				
AGENCY:	Animal ID #			
CASE #:				
DATE: DOCTO)R:	TIME: Start	Finish	
BREED:COLOR:	SEX:	AGEEST:		
TEMPERAMENT:	WT (lbs.):			
BCS: (1) Emaciated (2) Very Thin (3) Thin (4) Lean (5) Ideal (6) Mildly overweight (7) Overweight (8) Obese (9) Morbidly obese		
T:MM/CRT:	HYD	:		
EENM:				
H/L:				
ABD/PERINEUM:				
U/G:				
M/S:				
SKIN:				
FEET/TAIL:				
PARASITES:				
APPETITE:				
COMMENTS:				
SAMPLES TAKEN:	ON SCENE TESTS:			
PARASITE TX:	VACCS:			
OTHER DIAGNOSTICS REQUIRED:				
EUTH: Y N REASON:	APPVD BY:			
TX INSTRUCTIONS:				

ABD, abdomen; APPVD, approved; BCS, body condition score; CRT, capillary refill time; EENM, eyes, ears, nose, mouth; EST, estimated; EUTH, euthanasia; H/L, heart and lung auscultation; HYD, hydration; ID, identification; MM, mucous membranes; M/S, musculoskeletal; T, temperature; TX, treatment; U/G, urogenital; VACCS, vaccinations; WT, weight.

addition, the veterinary teams should use consistent terminology and abbreviations, which may be posted in the exam areas. Breed descriptions should be done carefully. Unless the breed is known, it is often best to use "breed-type" or predominant "breed-mix." The body condition score (BCS) to be used should be posted in each examination area so that the veterinarians can refer to it. The age or estimated age of a cat should only be documented if supported by examination findings, such as dentition or ocular changes. It is preferable to use designations of neonatal, juvenile, adult, or geriatric with documentation of the basis for the determination. After the examination is complete, a check mark should be placed on the animal's ID marker to create a visual indication that the animal has been examined. Any color-coded markers should be assessed and removed or changed based on the examination; those that may impact shelter operations should be communicated to the shelter manager.

Medical Protocols

The standard medical protocols enacted depend on the known existing conditions and diseases within the population, the expected length of stay in the temporary shelter, and the expected disposition of the cats; however, a variety of infectious diseases (including respiratory, enteric, and dermatologic pathogens) should be expected.⁷ Depending on the legal process, the cats may be adopted directly from the shelter, placed at another animal facility within or outside the area, placed in foster homes, or euthanized. These potential scenarios and outcomes may be fluid and will dictate what protocols are most appropriate for the cats at any given time. The medical protocols should be implemented during the forensic examination process.

Vaccination and Deworming

Standard vaccination protocols should follow the American Association of Feline Practitioners (AAFP) recommendations for shelter-housed cats.⁸ Vaccinations should be given at the time of intake to the temporary shelter and should include feline herpesvirus type 1, feline calicivirus, feline panleukopenia, and rabies. Vaccination for feline leukemia virus (FeLV) may be considered based on viral test results and group housing.

A majority of intensively housed cats will harbor at least one enteropathogen, often of zoonotic significance; the presence of such pathogens is not limited to cats with clinical

signs of illness.9 Therefore, routine deworming for roundworms, hookworms, and tapeworms should be part of the standard medical protocol. Fecal testing is not necessary unless there is unresolved diarrhea after deworming, or it is otherwise dictated based on clinical illness. Coccidiosis is a common finding in large-scale cat cruelty cases; it is found in up to 23% of cats with diarrhea and 33% of clinically healthy cats.9 Based on observed diarrhea findings at the scene, within the temporary shelter, or diagnostic test results, it may be reasonable to treat all cats for coccidiosis. Ponazuril is an effective treatment for coccidiosis and is easily administered to large numbers of cats, given orally once daily at 15 to 30 mg/kg for 1 to 3 days and repeated if necessary in 1 week.^{3,10} The stressors the cats have been exposed to along with dietary changes at the temporary shelter can contribute to diarrhea. In addition, many cats from these cases may harbor other enteropathogens, such as Tritrichomonas, Giardia, or Cryptosporidium species, as well as feline enteric coronavirus, which may or may not be a cause of refractory diarrhea.^{9,11} Any additional testing and interpretation should be conducted as discussed later in this chapter.

Diagnostic Testing

All diagnostic testing decisions for the cat population should be done with consideration for the goals of the operation; the legal impact; the health of the individual cat and the general population; the stress on the cat; the expected time length for housing; the future placement of the cats and the placing agency's responsibilities; the financial and personnel resources; and clinical relevance. For each test considered, both the test itself and the action to be taken based on its result must be appropriate and reasonable. In a large-scale case, tests that may be recommended or conducted in private or shelter medicine practice may not be appropriate or reasonable. The goal is not to cure all animals and eliminate all pathogens prior to the cat leaving the temporary shelter, rather it is to immediately identify and address any important medical issues, improve overall physical and mental health, and address any obvious zoonotic issues. This should be a clear and constant guidepost for decisions made. It cannot and should not be the expectation to test and treat for everything. As with any shelter situation, these cats may be asymptomatic carriers of a variety of pathogens. Testing can result in information that is not currently relevant to the health of the animal yet force decisions for unnecessary and inappropriate actions for that individual animal or the general population.

For large-scale cruelty cases, it is recommended to test cats for FeLV and feline immunodeficiency virus (FIV) based on the guidelines established by the AAFP.¹² Depending on the test results and the original housing at the crime scene (i.e., pre-existing exposure), changes in the housing location within the temporary shelter may or may not be recommended. Cats that appear ill without a grossly apparent cause should have routine laboratory work analyzed, including a full biochemistry profile, complete blood count, and urinalysis. Such documentation is especially important in legal cases.

Euthanasia

Protocols for euthanasia, necropsy examinations, and the storage of deceased animals should also be determined in advance. Because the animals are evidence and also to remain sensitive to the case responders and public sentiment, the criteria and parameters for euthanasia decisions should be discussed with the lead investigator and prosecutor prior to the day of seizure. The decision for euthanasia should first be agreed upon by the examining veterinarian and the case lead veterinarian. The lead veterinarian should obtain permission from the lead investigator to perform euthanasia according to the agreed upon parameters. Another factor to address in the planning phase is the use and storage of controlled drugs, including euthanasia solution and sedatives. A controlled drug log must be maintained according to applicable laws.

COMMON MEDICAL FINDINGS

Many of the cats may have obvious medical needs. Regardless of the presence or absence of clinical signs, it should be expected that most of the cats are likely carrying multiple different pathogens.¹³ These may or may not become clinically relevant, depending on the individual cat and the stressors placed on it.

Upper Respiratory Tract Disease

The most common medical finding is upper respiratory tract disease (URTD). This may vary from mild to severe with secondary pneumonia, ulcerations of the nasal or oral area, nasopharyngeal polyps, and ocular involvement (Figure 69-2). Mild cases may not need to be treated while being closely monitored for disease progression; most cases will resolve within 7 to 10 days.¹⁴ The more severe cases typically involve secondary bacterial infection, regardless of the primary pathogen, which should be treated aggressively.

Considerations for choices of medication should include the availability of personnel and their ability to administer



Figure 69-2: Severe upper respiratory tract disease in a cat with significant nasal and ocular involvement, including loss of the right eye.

medication, the possibility of administering medication through canned food or treats, dosing intervals, possibility of multiple pathogens, and risk of side effects. Stress reduction plays the single greatest role in the remission and prevention of URTD in cats;¹⁴ therefore, particular attention should be given to providing an enriched environment as a component of the treatment plan.

Dermatologic Disease

Skin and fur conditions are quite common in large-scale cruelty cases. The cats often have urine and/or fecal staining of fur, especially on the feet, usually with associated dermatitis. Other issues related to the feet include contact podo-dermatitis, plasma cell pododermatitis, and overgrown or embedded claws (Figure 69-3). Cat bite abscesses are not uncommon. Severe matting may be seen on longhaired cats with fecal soiling or impaction in the perineal area with associated dermatitis, there may be other external parasites, such as *Cheyletiella*, lice, and demodectic or sarcoptic mange. Stress can cause alopecia due to overgrooming or self-mutilation (Figure 69-6). Less commonly, cases of



Figure 69-3: Severely overgrown and embedded claws.



Figure 69-4: Severe fecal soiling and matting on the perineal area and hind legs.

Streptococcus canis have been reported in intensively housed cats, often manifesting with skin ulceration and necrotizing fasciitis (Figure 69-7).¹⁵

Dermatophytosis may be seen in some cats but rarely is a widespread issue within the population. Cats may be mechanical carriers and never develop clinical lesions themselves; such cats are seldom clinically relevant to the case, the individual animals, or the general population. For these reasons, dermatophyte testing is not routinely recommended on intake of cats or for those without dermatologic lesions. Rather, the focus should be on diagnosing and treating cats with suspicious lesions and enacting precautions for handling and cleaning. Housing placement within the shelter for cats suspected or diagnosed with dermatophytosis should be based on the considerations previously discussed.



Figure 69-5: Severe skin ulceration and dermatitis on the perineum and lower legs from chronic fecal contact.



Figure 69-6: Severe alopecia due to stress-induced overgrooming.



Figure 69-7: Ulcerations on the dorsal aspect of the front left paw as a result of infection with *Streptococcus canis*. (Courtesy of Dr. Brian DiGangi.)



Figure 69-8: Red coat changes along with healing wound on the left hemithorax.

A variety of clinical abnormalities of the skin result from nutritional deficiencies, including starvation. A common finding is a sparse, dry, dull, and brittle hair coat with hairs that epilate easily. Seborrhea sicca and patchy alopecia may be seen. Loss of hair occurs due to anagen and/or telogen defluxion. In the anagen or growth phase of the hair cycle, there can be loss and/or abnormal growth of hair, resulting in broken hair shafts. With telogen defluxion, there is widespread loss of hair in the quiescent phase of the hair cycle due to large numbers of hair follicles being synchronized in this phase. Loss of normal hair color and hair keratinization abnormalities can occur. In cats, decreased melanin deposition due to amino acid deficiencies results in a reddish cast to the hairs, sometimes called *red coat* (Figure 69-8). Erythema or crusting in areas of friction or stretching, such as



Figure 69-9: Rectal prolapse due to chronic diarrhea.



Figure 69-10: Large nasopharyngeal polyp protruding out of the external ear canal.

in the distal extremities, may be found. Other common findings include decubital ulcers, poor wound healing, and secondary bacterial or yeast skin infections.¹⁶

Other Medical Conditions

There are numerous other medical findings that may be seen or develop in these cases:

- Mild to severe anemia associated with severe flea infestation, *Mycoplasma haemofelis* (feline infectious anemia), FeLV, FIV, chronic disease, or malnutrition
- Feline panleukopenia, especially in young kittens
- Exposure to *Salmonella* spp. from living in unsanitary conditions
- Rectal prolapse in cats with chronic diarrhea (Figure 69-9)
- Ear mites, bacterial otitis, nasopharyngeal polyps, and aural hematomas (Figures 69-10 and 69-11)



Figure 69-11: Cat with nasal discharge and hematoma of the right pinna.

- Oral lesions, including ulcerations associated with URTD, stomatitis, and dental disease
- Urinary tract issues (e.g., urinary tract infection, idiopathic cystitis, nephroliths, uroliths, crystalluria, and vaginitis) are often the reason the cat was presented to the original shelter or sanctuary

The clinician should be cognizant of the possibility for these and other underlying medical issues that may be primary or secondary to other medical conditions, malnutrition, dehydration, stress, and/or an unsanitary environment. Often, the investigation findings may provide information on pre-existing conditions through intake paperwork or hospital records. These underlying issues may only be detected with routine blood work and urinalysis; affected cats may require further diagnostic testing, imaging, or hospitalization.

SUMMARY

The clinical management of large-scale feline cruelty cases starts at the scene and continues to the temporary housing in a shelter or hospital. It is critical that veterinarians understand the importance of the role they play as part of the investigative team and the requirements for documentation in a legal case. The veterinarian may become involved in these cases directly at the scene and shelter or by receiving a patient into the hospital. By the very nature of large-scale cruelty cases, the cats will have a wide range of issues associated with high volume housing and long-term neglect. It is important to be mindful that this will be a fluid situation requiring a process of continuous assessment of the animal's health and behavior to detect early signs of developing issues and initiate treatment. The simple actions of providing appropriate housing, food, routine medical treatments on intake, and overall stress reduction will often result in rapid improvement of cat health. There is a greater chance of recovery-even for the most severely affected cats-when both physical and mental needs are addressed.

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