

Getting Involved in Avian Practice

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Introduction

Birds were heralded as the pet of the 1990's. Current pet industry estimates place the number of pet birds to be approximately 50 –70 million in 15% of all U.S. households. Many factors are responsible for increased popularity of pet birds. Birds are basically a "low maintenance" pet. High density housing makes it difficult to maintain a dog and many housing units place restrictions on cats and dogs but not usually birds. Nationwide, more pet stores are carrying birds, particularly the number of larger birds available has increased. The increased success in hand-raising birds domestically is a major reason for their availability. Hand-raised birds are tamer, calmer, less likely to carry exotic diseases but most importantly are already "bonded" to people, making them more affectionate and hence a more desirable pet.

Even though veterinarians involved in avian practice are probably seeing more and more pet birds, there are many more pet bird owners have birds that are not being seen. Only 7.6% of bird owning households sought veterinary care in 1987, compared to 78% of dog owners and 60% of cat owners (AVMA,1988). These figures indicate an untapped source for veterinarians due to the tremendous need for veterinary services for birds. Most bird owners do not understand the health care needs of pet birds nor do they realize the services veterinarians can offer to pet birds.

Beginning in Avian Medicine

Avian medicine is an extremely exciting and dynamic field, providing a great opportunity to expand and diversify an existing practice. Avian medicine is undergoing an "information explosion." The understanding of bird diseases, nutrition, and husbandry has increased dramatically. Through the combined efforts of many diverse groups of individuals including bird breeders, veterinarians, and aviculturists, great advancements and improvements have been seen in the field of aviculture. However, the starting avian practitioner, though interested in birds, may be overwhelmed by this wealth of information being generated about pet birds.

Many pet bird owners and breeders are frustrated when there are no veterinarians in their area that see birds or are able to provide basic emergency care. Many veterinarians are reluctant to get involved with pet birds due to lack of familiarity. Veterinary students should recognize the importance of developing expertise in avian medicine. When seeking employment they can provide a new facet for practitioners who are not already in the field, hence making them more attractive as an associate.

With commitment and a small financial investment a bird practice can be developed and help meet a growing need.

Basic References

Due to the large amount of information generated about avian medicine it may be difficult to know where to start. Listed below are several references that can prove quite useful while engaged in the practice of avian medicine.

Association of Avian Veterinarians (AAV) - Any veterinarian interested in avian medicine should definitely become a member of the AAV. Members receive a quarterly journal which includes current research and topics related to avian medicine. The AAV has a yearly conference, which attracts speakers worldwide, including a scientific program, ranging from basic to advanced topics, and practical wet labs. If planning to become involved in avian medicine it is strongly recommended that the AAV conference is attended as it meets the needs of the beginning, as well as the experienced avian practitioner. For membership information contact the AAV Central Office, PO Box 811720 Boca Raton, FL 33481-1720 (407)393-8901.

Diseases of Cage and Aviary Birds by Roskopf and Woerpel (Lea & Febiger)- The classic avian medicine textbook, first published in 1969, authored by M. Petrak. The current edition (3rd) was revised in 1996.

Clinical Avian Medicine and Surgery by Harrison & Harrison (W.B. Saunders)- It was one of the first complete avian medicine textbooks (1986) and still serves as an excellent reference.

Avian Medicine: Principles and Application by Ritchie, Harrison and Harrison (Wingers) Outstanding reference. No avian medical library is complete without this book published in 1994.

Avian Medicine and Surgery by Altman, Clubb, Dorrestein, and Quesenberry (Saunders) An excellent complete reference published in 1997.

Popular bird magazines (Bird Talk, Bird Breeder, Pet Bird Report are particularly good sources) - The popular bird magazines discuss the varieties of birds as well as information on training, taming and husbandry. A successful avian practitioner should be able to identify the major varieties of pet birds and aspects of their care. Clients will judge the practitioner on this basic knowledge.

Parrots of the World by Forshaw and Cooper - It is a useful reference for identifying an unfamiliar variety of parrot. It is lavishly illustrated with color drawings of every imaginable type of parrot.

Avian Hematology and Cytology by TW Campbell (Iowa State University Press)- A valuable reference for the avian medical laboratory.

Seminars in Exotic Pet Medicine (W.B. Saunders) – Excellent periodical that focuses on a particular topic each issue.

Veterinary Clinics of North America, Exotic Animal Practice (W.B. Saunders) – A new addition to a well-respected series.

Website and other information sites are also available electronically, but be cautious about accepting some of this unreferenced material at face value.

Basic Equipment

Certain equipment is essential for handling, diagnosing and treating pet birds. A veterinary hospital should already possess the standards; microscope, centrifuge, radiology equipment, anesthesia machine, and means of sterilization. However, other specific pieces of equipment are needed for avian medicine. An important consideration is that the equipment discussed below can be incorporated into a small animal practice so that money will not be spent on material for limited usage.

Source of clean towels - During the physical examination small birds are examined in bare hands, larger birds such as cockatiels in paper towels and large birds in towels of the appropriate size. Gloves are not recommended due to the difficulty in keeping them clean and other factors discussed later.

Source of direct light - A good source of light is essential, especially during the oral examination. A penlight may suffice but an adjustable overhead light in the examination room is preferred.

Source of magnification - A binocular head loupe with magnification (Optivisor™) is helpful during the exam, especially when dealing with small birds.

Ophthalmic forceps - Small forceps (not rat-toothed) are useful during the exam. They are used to clean debris from the nares and open the mouth of a smaller bird for an oral exam.

Mouth speculum (Lafeber Co) - A variety of sizes are available and they are essential, especially with larger birds, to complete an oral examination. Some practitioners use scissors, hemostats, gauze strips, or nylabones to open the beak.

Gram Scale - Every bird examined should be weighed. The triple beam balance with the "pot" attachment (Ohaus) is ideal. The pot is large enough to accommodate Amazon parrots and small cockatoos. Larger birds are weighed on a pediatric scale; either perching or wrapped in a towel if frightened. Scales with built-in perches have not proved to be successful as the birds are usually too excited to remain perched.

Grinding tool - A hand-held drill with grinding attachments (such as the Dremel™) is useful for the grinding of beak and nails. A variable speed drill will enable the shaping of beaks even on small birds. The cone type of attachment is very effective. It may be difficult to sterilize the grinding tip adequately.

Laboratory equipment - A well-equipped lab with the ability to perform in-house diagnostic tests is invaluable for providing rapid diagnosis and effective treatment. The importance of in-house diagnostics cannot be emphasized enough. More than likely the material is probably already in a small animal practice.

a) Hematology- Microhematocrit tubes, coverslips, and stain are all that is needed to generate basic hematology.

b) Serology- Chemistry systems can be used to perform in-house avian chemistries on serum and plasma. Currently available chemistry systems can provide individual panels on a small amount of sample. Most chemistry systems available now allow for ease of usage and provide for improved diagnostic capabilities in all aspects of practice. If such a system was only used for avian medicine it might be difficult justifying the initial cost. However, when provided with the opportunity to perform chemistries on birds, pocket pets, but to also obtain instantaneous answers for canine/feline medical cases and presurgery workup, the investment will be well worth it. If such a system is not possessed, many commercial labs offer avian diagnostic services, including hematology and serology.

For the collection of serum samples, the Microtainer Serum Separators (Becton-Dickinson) are invaluable. Blood can be collected for immediate use or for transport if more sophisticated testing is required.

c) Microbiology - Other essential tests in avian diagnostics are staining and culture/sensitivity. Fecal samples, cloacal swabs and exudates should be examined and stained. Common stains frequently used include, Gram's, Wright's, Diff-Quick, acid-fast, and Gimenez. Performing in house microbiological testing is not difficult provided that antibiotics used in avian therapeutics are tested. Once again, commercial labs provide this service, however check with other local veterinary or human hospitals for their willingness to work with avian samples. Culturettes are ideal for collecting samples and for transport. Calgiswabs (calcium alginate swabs) are useful, because of their small size, for obtaining samples from small birds.

Radiology - Some practitioners use special approaches to plain film radiography including economical and high detail dental films, for small patients such as budgerigars. Avian positioning boards constructed of Plexiglas are available and provide ideal positioning for radiographs (Schein and other sources).

Equipment for hospitalized birds

a) Incubators - If birds are to be hospitalized, a temperature and humidity controlled environment is essential. An intensive care or pediatric unit (for hand fed baby birds and most critical cases) should be available. Incubators designed for pet birds are available but expensive. Infant incubators (Armstrong) which can be modified for use with birds are very effective. Sometimes local hospitals and medical suppliers sell used incubators, but persistence is important. If an incubator is not available, a kennel can be used, as long as a perch and source of heat are provided. A Plexiglas front can be added, but is not essential. Kennels work well for larger birds such as macaws. Some avian practitioners have a specially designed perch set up for use in a kennel. Other practitioners prefer to use an aquarium and heating pad for their hospitalized birds. An infrared brooder lamp often is used to provide radiant heat for bigger birds like macaws unless an entire ward can be maintained at high temperature (85 degrees F). Brooder lamps are aimed at one side of the cage or hospital unit to allow respite from excessive heat. Water should be kept well away from these units.

b) Perches – Perching materials for hospitalized birds usually are constructed from PVC piping which is easy to clean, cut and arrange with stands and suction devices.

c) Feeding tubes - Sick birds often need supplemental nutrition so gavage feeding may be required. Gavage equipment usually includes small metal ball-tipped crop needles and red rubber or soft plastic blind-ended feeding tubes (with side ports). Red rubber Sovereign urethral catheters are also effective for gavage feeding. The sizes used for specific avian species are described in a later section. For example, an "eight French" is the size used for a budgerigar. Some practitioners prefer metal gavage tubes, which are widely available as well.

d) Food/Feeding solution - Keep the refrigerator stocked with formulated diets (pelleted and extruded psittacine foods), handfeeding formula, and seed mixes for hospitalized patients. Insect contamination and oxidation may be a

problem in stock held at room temperature. Many avian veterinarians market avian nutritional products. Samples might be displayed in the examination room where discussions of these products usually will take place.

An appropriate feeding solution to provide nutritional support to hospitalized birds is of utmost importance. Various formulations can be concocted or commercial products can be purchased, such as the line provided by Lafeber Company (Odell, IL), including, Emeraid I/Emerald, a quick source of energy which is easily absorbed; Emeraid II, more of a maintenance formulation; and Nutristart, used for hand feeding baby birds.. Inventory requirements include special alimentation products suitable for gavage feeding patients with poor digestive function but high caloric needs. Products intended for other species (including humans) may form curds if the crop pH is low enough; dilute these products before using or use avian alimentation products. An oral electrolyte formula also should always be on hand.

e) Syringes - For most normal injections U-100 insulin syringes (50 and 100 unit sizes) are used. Tuberculin syringes can also be used, needles of 26-30 gauge are preferable. A Hamilton microliter syringe can be helpful when delivering minute amounts of medication.

f) Catheters - Spinal needles (20 and 22 gauge) are used for intraosseous fluid administration, and a burette (to limit fluid volume) also will be needed for this (Buratrol 150, Baxter) if a fluid pump is not available. The 27-gauge butterfly catheters are very useful in exotic practice.

g) Nebulizer - For birds with severe respiratory tract disease/air sac disease, a nebulizer is indispensable. Oral and injectable antibiotics alone cannot reach therapeutic levels in the air sacs. Once again check with human hospitals/suppliers for used equipment. It is an important piece of equipment for an avian practice and not inordinately expensive, so do not hesitate to purchase a new one. The equipment can also be used to treat severe respiratory disease in other small animals so it is versatile.

Surgery

a) Surgical Equipment - Avian surgery can be performed using standard small animal instruments, but some pieces of equipment can simplify surgical procedures. A source of magnification is imperative during avian surgery so the binocular loupe is very useful. Ophthalmic or microsurgical instruments, although not absolutely required, facilitate surgery. Special avian drapes are available which are transparent to aid in monitoring the bird as well as being adhesive in strategic areas. Although these drapes are useful, some practitioners have used gas-sterilized plastic wrap (eg. Saran Wrap™) drapes with great success. Essential additions to the avian surgical pack are wooden cotton-tipped applicators, which can be sterilized. They are very useful for the absorption of blood and hemostasis. Suture used is a matter of preference but the size most frequently used is 3-0 to 4-0 and smaller with a swaged on needle.

b) Anesthesia – Small endotracheal tubes are commercially available and very effective for delivering gas anesthesia to birds and small mammals. For small birds syringe cases (3cc size for example) can be used as face masks. Many avian practitioners use isoflurane (Anaquest) anesthesia exclusively for avian surgery. It is well worth the investment. The birds can be anesthetized quickly and safely using a face mask. Recovery is usually rapid.

c) Radiosurgical unit - One piece of equipment that is very beneficial in avian practice is a radiosurgical unit (Surgitron™ - Ellman International Manufacturing, Hewlett, NY). The ability to make incisions with minimal hemorrhage, and the hemostasis provided, have revolutionized avian surgery. The more practitioners use it, the more they grow to depend upon it and develop further applications. Another advantage is that it can also be used in small animal surgery, so its purchase can be further justified.

d) Endoscope – Avian practitioners may be called upon to surgically sex birds. Although an otoscope can be used, there is really no comparison to an endoscope. There are commercially available adapters that utilize the otoscope base (Focuscope™) to create a reasonable endoscope with the advantage that it is not as costly as an entire endoscopic set up. The advantage to an endoscope is that it can be used as a diagnostic tool, such as a laparoscope, to evaluate internal organs and as an aid during biopsy procedures. Some endoscopes are available that possess attachments to facilitate biopsy sampling.

Other Equipment - Beak-repairing resins (Ellman International Manufacturing, Hewlett, NY) and dental acrylics (UV light sensitive) are very useful to aid in repair after trauma or to correct malocclusions. Many avian practitioners

insert microchips and should keep a supply as well as a microchip scanner on hand. Access to ultrasound imagery and/or fluoroscopy may become important in the coming years. Laser surgery is becoming very popular in avian practice.

Marketing and Managing the Avian Practice

Time Management

A common problem in avian practice is the extra time that is needed to deal with the avian patient (and owner). This is partly because of the time used in exchanging information with the client and partly because veterinary technicians or other support personnel often are not trained to perform services for the avian patient and client.

If support staff can professionally discuss the finer points of husbandry, biology, and purchasing options, it will save the veterinarian from returning countless phone calls. Wildlife calls can be directed to a local licensed rehabilitator after both interest and compassion have been demonstrated by the telephone staff.

The animal health technicians and support staff should be trained to work without direct assistance from the avian veterinarian in some basic avian procedures. This will dramatically shorten the time spent by the veterinarian in the examination room. The veterinarian will not be able to see sufficient patient numbers to be cost effective without a support staff that can perform the following:

1. Restrain birds and trim wings and nails in an expert manner.
2. Give nutritional counselling to the client in the examination room; sell nutritional products (if required).
3. Demonstrate the administration of oral and injectable medications to the owner in the examination room after the veterinarian has departed. Escort the client to the reception area.
4. Set birds up for hospitalization, providing heat, perches, medication, hydration/alimentation (gavage if needed).
5. Sedate and take avian blood samples/radiographs (veterinary supervision for anesthesia).

Avian continuing education will be needed for technicians to fulfill these vital roles. Programs are available through the Association of Avian Technicians, AAV, and other large national veterinary meetings. Technical staff also might be responsible for the care of a clinic bird (an educational experience in itself). The clinic bird could assist technicians with the production of "normal" blood smears and radiographs or other simple techniques. A personal subscription to a lay avian publication is recommended if the technicians will be discussing nutrition or husbandry with clients.

Reducing the time spent collecting information is the goal of the avian history form. Clients may fill these out while waiting in reception, detailing items such as complaint, number of birds, source of this bird, when purchased, diet, droppings, lifestyle, etc. The form should be scanned by the veterinarian before entering the examination room. This allows the veterinarian to focus on relevant portions of the history and also avoids the time consuming exercise of writing down important history points in the medical record. The history information will already be available for any other practitioners who may later consult on the case.

Time spent in counselling and educating clients can best be managed by the use of 1) the technician, 2) printed handouts (such as those published by the AAV), and 3) the use of books and magazines. This will save time and increase compliance. Do not depend on the eloquence of an examination room discourse when counselling clients on such complex subjects as feather mutilation. Brief printed handout material will be required for information retention.

Increasing the Avian Caseload

Pet retailers are often a principal source of referrals. Most retailers specialize in certain areas, and it usually is productive to see the set-up of each store in person. Maintaining a good working relationship with local pet retailers can be profitable for all parties involved. The animals (and the consumer) can hardly benefit if the retailer considers the veterinarian to be an adversary.

Many avian veterinarians offer seminars for local retailers, breeders, and bird clubs. Give tours of the hospital premises after a seminar. Host an open house. Retailers and breeders also may be attracted with a "discount." If referrals will be forthcoming, this may be a reasonable strategy. One cost effective method is to offer a gross

necropsy service at reduced or no charge for breeders and retailers. This is a low stress endeavor that can usually be done at the veterinarian's convenience and it always provides valuable information and experience in avian pathology. It is also an important service for the retailer or breeder.

Show interest in avian medicine in the reception or waiting areas. Special membership plaques, photographs, and framed posters are popular, as is a clinic bird. Clients already assume veterinarians have expertise in dogs and cats; so it must be demonstrated that one possesses expertise in birds. Clinic birds also demonstrate important husbandry points to clients. Ensure a clean roomy cage, feed formulated diets if possible, and use a variety of avian perch types and toys. An informational plaque or sign should be posted at the cage to detail these recommendations.

Some avian veterinarians promote their avian experience or interest within the confines of a conventional dog and cat hospital by creating a separate clinic complete with its own name and special hours. This gives the client the feeling of specialization. Board certification in avian medicine is now available through the American Board of Veterinary Practitioners. The hospital staff should be careful not to describe the veterinarian as a specialist in birds until and unless board certification is completed.

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