

Pediatric Considerations with Pet Birds

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Baby birds present a whole set of unique potential problems. There are several serious considerations to be made if you are considering the purchase of a baby bird and I would like to offer some recommendations that will assist you in the process.

Baby Birds/Hand-feeding Birds

Unfortunately, purchasing a newly weaned bird or hand-feeding a baby bird has the potential for disaster for those who are unfamiliar or unprepared for unique circumstances involved. Having a baby bird is like no other experience. The birds are sweet, affectionate and develop a wonderful bond with people. If the bird is hand-fed by the new owner, some feel that this bond can be further strengthened. However, hand-feeding can be dangerous if done improperly, prompting some breeders and pet retailers to have a policy of not selling any birds before they are weaned. A weaned baby bird still will develop a strong bond even if the new owner does not actually do the hand feeding. A person determined to hand feed a bird should be prepared to make a commitment and learn the proper technique so that the baby bird is never placed at risk. Some concerns and problems that have been encountered with the purchase of baby birds are discussed below.

Is the bird really weaned?

Occasionally, a young bird will be sold as newly weaned, however, when the bird is placed in a new environment it may become apprehensive and revert back to babyhood, not eating on its own and preferring to be hand-fed. Monitor the food intake of the new bird. Sometimes the bird is not really eating and may be playing with the food. If the bird eats seed, it may be cracking the hull and not swallowing the seed. A pellet eater may be pulverizing the pellet to powder but not eating. The best means of monitoring the food intake is evaluating the droppings, what goes in has to come out. The droppings should have a substantial fecal portion. Check the droppings at the breeder or pet retailer before the bird is taken home. Develop a feel for what is the normal appearance and number of droppings for the bird. A change in the number and appearance in the dropping could indicate a problem. If the droppings are all white or have scant fecal matter it may indicate that perhaps the bird is not eating enough. If this is the case then the bird may need to be hand-fed again until it begins to eat on its own. Check with the breeder if this occurs for suggestions. Do not assume that because the bird is weaned that it will continue to eat well in a new home. Play close attention to the eating habits. Avian veterinarians could recount several instances in their practices where baby birds come into the hospital critically ill and emaciated because the bird was not eating enough on its own. These unfortunate birds are starving to death due to the inattention or inexperience of the owner evaluating the eating habits of the bird.

Purchase a scale

A scale is probably one of the best purchases that could be made if a baby bird is obtained (or an adult bird, for that matter). It is almost a necessity to help protect the investment of newly purchased baby birds. Baby birds should be weighed each morning with an empty crop at the same relative time before feeding. Excellent, inexpensive scales can be purchased that can provide accurate weights in grams. A slight daily weight fluctuation is normal, however, a steady weight decline is a cause for concern. A decline when the bird is being weaned is normal, but a rapid drop could indicate that the bird is being weaned too quickly. These weights should be recorded and trends noted. Weighing the bird regularly and monitoring the droppings are two excellent means of monitoring the baby bird during the stressful transition from being hand-fed to eating on its own.

Practice hand-feeding with the breeder/pet retailer

If a person desires to hand-feed a bird, it is imperative that it can be done properly, as a mistake or carelessness could lead to injury, sickness or death. It cannot be emphasized enough how important it is to practice hand-feeding the bird under the watchful eye of the breeder before it is taken home and done without assistance. It would be ideal

if the breeder or pet retailer would allow the new owner to prepare the food, check the temperature and feed the bird under their guidance a few times until the necessary skills are developed. The same formula the bird was raised on should be used initially (it can be changed later if preferred) and fed at the same consistency the breeder uses. If the diet is suddenly changed or the consistency is different, the bird may refuse to eat it. Food that is hotter or colder than the bird is accustomed to could lead to a refusal to eat. Once again, evaluate temperature ranges with the breeder. If the food is too hot, there is a risk of burning and damaging the crop, so check each syringeful after it is drawn up to ensure that it is not too hot. It can be dangerous to microwave formula, due to the uneven heating produced.

Performing the actual hand-feeding under the direction of the breeder is preferred so that the bird becomes familiar with certain positions and handling during the feeding process. If the positioning of the bird or the hand position during feeding is different than it is accustomed to, it may refuse to eat. Doing this in front of the breeder will enable them to offer assistance with the proper technique that the bird was used to during the hand-feeding process. Due to improper handling or accidental overfilling of the crop, the bird could aspirate food into the trachea, lungs, air sacs and either die suddenly or develop aspiration pneumonia. That is why training by the breeder is important to safeguard the health of the bird.

Obtain a copy of the feeding schedule and the amount fed

The breeder or pet retailer should tell how often the bird is being fed, what diet is used and how much is given at each feeding. Also, a reasonable plan should be put together so that there is a protocol on how to wean the bird as it begins to eat on its own. If the bird was being fed 30cc three times a day by the breeder and now that the bird is home, it is only taking in 10cc twice a day, this could be a potential problem, especially in young birds that are not eating anything on their own yet. Occasionally when a bird is in a new environment, it becomes so stressed that even though it was eating on its own or doing well on one feeding daily, it may not be eating well enough to maintain condition. In a case such as this, the number of feedings may need to be increased or the weaned bird might need to be hand-fed until it becomes adjusted to the new surroundings. Once again, monitoring weight and droppings are useful means in evaluating dietary intake. Be sure to get as much information as possible from the breeder or pet retailer related to the bird and its feeding schedule. Stay in contact with them if there are any difficulties or concerns, so that the well-being of the bird can be ensured.

Play close attention to the seller's advice

Some people may think that they know it all when it comes to birds, but they should pay attention to any information that the breeder or pet retailer has to give about the bird. As mentioned above, if the bird is being hand-fed they should provide the formula (or tell what type) that was used during hand-feeding, should discuss the current feeding schedule and also a weaning plan to be enacted when the bird is to be converted to self-feeding. If the bird is already weaned, the buyer should be informed of the type of food and any supplements that are currently being provided. For example, if the new bird was a seed eater and immediately placed on pellets in the new home, it might starve due to unfamiliarity with the diet. Let the bird acclimate to the new environment with familiar food and, if so desired in the future, convert to a better, balanced diet after it has adjusted. Prepare a list of questions or concerns and go over them with the breeder or pet retailer before the bird is taken home. They should respect any questions that are asked and take the time to answer them fully. It is a good idea to write these questions down because in the excitement of taking the bird home key questions might be forgotten.

Isolate any new bird for at least 30 days

One of the most common mistakes people make is that they do not isolate a new bird that is introduced into their collection. There is a great risk of disease transmission when a bird is placed in a new environment because, if disease organisms are present, when this bird is stressed, organisms may be shed and transmission to other birds may occur. With the existence of deadly avian diseases, it is a risk not worth taking. On the other hand, when the new bird is in the environment and stressed, it might potentially pick up a disease that is already present in one of birds of the collection. This disease may be sub-clinical so it will not cause disease in a healthy, unstressed bird, but the new arrival, with lowered resistance, could be at risk. Even though a newly purchased bird had been given a clean bill of health by an avian veterinarian it is still imperative that it be isolated for the prescribed period because some conditions may be undetectable or may be incubating only to develop at some time after introduction into the new environment. Small birds such as budgerigars and cockatiels, should be isolated as well. People feel that these small

birds can be placed with others right after purchase. Serious disease can exist in these birds as well, such as chlamydiosis or *Mycoplasma sp.* infections. Quite often these birds can carry parasitic infections such as *Giardia* that are readily transmissible to the other birds in a collection.

The isolation period for 30 days does not mean that the bird is merely kept in a separate cage. The bird should be kept in a separate room, preferably with separate air flow, its utensils washed separately from those of the other birds and, after it is handled, hands should be washed thoroughly before handling other birds. It is not enough to have the bird near other birds, then isolate it when it shows signs of sickness, because in many disease conditions the shedding of the disease organisms is occurring before clinical signs of disease are evident. It is heartbreaking if birds in a collection pick up a disease from a newly introduced bird which could have been prevented if biosecurity techniques were followed. There have been numerous instances where people who should have known better caused disease in their birds due to careless introduction of a new, disease-carrying bird that appeared healthy externally. The 30 day period is suggested because if the bird has a disease condition it will most likely break with the disease within this period of time, especially as it is being stressed in the new environment. Unfortunately, upon completion of this isolation period it cannot be guaranteed that a bird is not a potential source of disease for the other birds. Certain birds can be carriers of disease, such as chlamydiosis, and show no outward signs. Certain other diseases can persist in a bird for long periods of time, such as Proventricular Dilatation Disease (PDD), and cause outbreaks years later. However, the best that can be done is prevent as much risk as possible, so the 30-day isolation period is essential. Hopefully, as the years pass, the great level of avian research will progress so that veterinarians can continue to have new diagnostic tests and treatments available to battle the diseases that ravage the pet bird population.

Pediatric Problems

Malnutrition

Deficiencies – Neonates are sometimes on an inadequate diet. This is not as much of a problem now due to the commercially available hand-feeding formulas. However, some breeders still use home-made diets which may not be nutritionally complete and balanced. Another frequent problem is when hand-fed birds are not being fed enough and quite often lose condition and die due to the inexperience of new owners. A bird that was weaned at a breeding facility may become stressed in new surroundings and revert to wanting hand-feeding and stop eating on its own. Inexperienced owners do not recognize that such a bird is not eating and are not familiar with the proper evaluation of droppings or monitoring, so the bird could waste away. New owners of hand-fed babies should be counseled on how to determine if the bird is eating on its own, how to evaluate droppings, how to properly hand-feed and how to wean a baby bird effectively. Monitoring of the weight is important during this period so the purchase of a scale should be recommended to the client to protect their investment. Much of this material should have been covered by the breeder at the time of purchase, unfortunately all too often it has not, so the new owners may not have as much familiarity with the care required. Therefore, a significant part of the client education discussions with the owner should be a review these aspects of care.

Oversupplementation – Quite often well-meaning bird owners or breeders will oversupplement diets with potentially harmful results. Most formulated diets are nutritionally complete and balanced, requiring no additional additives. Care must be taken if additives are used and there should be an indication for their use. A frequently overused additive is calcium with the added danger if vitamin D3 is present. There have been numerous occasions where birds have suffered from vitamin D3 toxicosis with resultant renal mineralization. Check to determine the quality of the diet provided and if any additives are given.

Aspiration Pneumonia

Aspiration pneumonia can occur any time food is inhaled into the lungs. Most cases of aspiration pneumonia seen in avian practice involve baby birds during the hand-feeding process. It can occur if a crop is overfilled and the food retropulses (backs up) into the oral cavity where it can be inhaled through the glottis (opening into the windpipe). A baby with an overfilled crop could regurgitate and aspirate by merely lying down. Carelessness during the hand-feeding process is the most frequent cause. Food material may be accidentally deposited into the windpipe or improper hand-feeding may lead to overfilling of the crop with resultant back-up into the oral cavity. A hand-fed bird might regurgitate the formula if it is not the right consistency or temperature.

Treatment can be difficult and the prognosis depends upon how much food was inhaled. Aspiration of a large amount quickly could lead to sudden death. Aspiration of small amounts could produce a chronic pneumonia. Antibiotics coupled with nebulization therapy have proved useful in treatment.

Crop Stasis

Crop stasis, also termed sour crop, is a frequently seen condition in hand-fed babies. There are numerous potential causes for the development of crop stasis.

Primary Causes (involving the crop directly)

Crop foreign bodies can cause crop stasis. Baby birds do not know what is food and what is not. They should be carefully watched when on wood shavings or corn cob to be certain that they do not ingest the substrate material. They may pick up foods, such as peanuts in the shell and swallow them whole. Foreign bodies can sometimes be carefully manipulated retrograde out of the crop into the oropharynx (throat), however in some cases surgery may be required. If a known foreign body was ingested the sooner the bird is seen the better, because if the material travels into the proventriculus (first portion of the stomach) a much more difficult surgical procedure results.

Infection of the crop wall can lead to irritation and eventually crop stasis. A bacterial infection of the crop can be responsible, however, most of the time it is a systemic or gastrointestinal bacteria that slows transit and is secondarily involved. *Candida* (yeast) leads to the thickening of the crop wall producing a Turkish towel type appearance and can also involve the esophagus and oropharynx. *Candida* can affect any bird but the problem is especially common in cockatiels.

Atony (loss of tone) is caused by the overfilling of the crop with ensuing stretching and loss of normal nerve function or tone. An atonic crop will not empty properly. Crop bras may be helpful in this condition, supporting the crop until nerve function can return and the crop begin to empty normally again.

Secondary Causes

There are many secondary causes for crop stasis. Dehydration could be responsible. Dehydrated birds would be less active, gastrointestinal function would slow and water might be absorbed out of the food in the crop, leading to an impaction. Systemic infections can produce crop stasis as they will slow overall function. A mistake commonly made by veterinarians when presented with a bird suffering from crop stasis is to perform a crop wash and crop culture/sensitivity, ignoring the possibility that a systemic illness is occurring with the disease organism present in the intestinal tract. The crop is a reservoir and quite often the material in the crop has accumulated due to interference with gastrointestinal motility lower in the tract. There will be bacteria and yeast in the crop wash, but most likely these will be secondary. When evaluating crop stasis evaluate the whole bird. Malnutrition and low environmental temperature can slow crop emptying time.

Treatment of crop stasis depends upon what is causing the condition. However, certain steps should be taken in the initial treatment no matter what the cause. The fluid accumulation in the crop should be removed. An effective and safe way to evacuate the crop is through aspiration with a feeding tube, such as a soft rubber Sovereign urethral catheter of the appropriate size. Additional holes can be cut into the tube to facilitate removal. If the material is too thick to easily aspirate or the crop is impacted, a small amount of water can be added into the crop and mixed to ease aspiration. Whenever performing the technique on birds with dilated crop be extremely cautious as handling can easily lead to regurgitation and aspiration of fluid. Some sources advocate turning the birds downward and emptying the crop quickly by squeezing or milking, propelling the contents through the mouth. It can be effective but a risk for aspiration exists.

Once the crop has been emptied, appropriate medical therapy can be initiated. Injectable antibiotics are preferred, as due to the delayed crop emptying the drugs may not reach effective therapeutic levels quickly enough. To overcome dehydration intravenous or subcutaneous fluids can be given. When feeding is resumed the solution should be very dilute, such as Pedialyte or Emercal. Small amounts should initially be given and as the crop is emptying then larger amounts can be given. When dilute solutions are passing through the crop then the solution can be gradually thickened until back to normal consistency.

Crop Burn/Crop Fistula

Crop burn is a condition that develops because of carelessness. Hand-feeding solution that is too hot will burn the lining of the crop. Initially after the feeding, the crop may develop a reddened area which then will scab over in a few days. The problem is usually observed by the bird owner when the scab has loosened and food material runs out through the resultant fistula at the times of feeding.

Some minor cases of crop burn may not require surgical correction, but these situations are rare. More typically surgical intervention is the only option and, if not done carefully, reoccurrence is likely. It is imperative that the edges of both the epithelium and crop wall be trimmed back and debrided to where there is viable tissue. Two layer closure is essential, as if there is not adequate separation of the epithelial and crop layers, fistulation may redevelop.

Prevention is accomplished through the practice of good husbandry and hand-feeding techniques. After warming or preparing the hand-feeding formula, it should be well-mixed and the temperature checked before administration. Uneven heating by microwaving and poor mixing are quite often responsible for crop burn. The formula may appear to be a safe temperature at the surface, but may be dangerously hot deeper, where it would most likely be drawn up into a syringe. By taking the proper steps and precautions during the hand-feeding process this situation can be easily avoided.

Infectious Diseases

Young birds are prone to many infectious diseases. Their immune systems are developing and quite often they may have little natural immunity. Many breeders raise a chick directly from the egg in as sterile an environment as possible, with little exposure to normal flora which would occur if they were parent-raised. Another consideration is that the transfer from the aviary to a new home can expose a bird to different bacterial populations against which the bird has no defense. Conversely, these birds may have a resident population of potential pathogens that have caused no problem in the aviary setting, but when placed in a new environment, immunity may drop due to stress, making the bird more vulnerable to the development of disease from these previously innocuous organisms. Also in this type of situation, the bird may shed these organisms leading to the exposure of the resident population of birds in the new environment. Such occurrences reinforce the importance of a quarantine period any time a new bird is introduced into a collection of birds.

Due to their susceptibility to bacterial infections, young birds suffering from disease should have cultures and sensitivities performed to quickly determine the proper antibiotic therapy. Chlamydiosis (psittacosis) is always a consideration and whenever a newly purchased bird (or new bird of any age) is brought in for examination it should be tested for chlamydiosis. Quite often aviaries are affected with chlamydiosis and the breeder is unaware. Viral disorders are also common in young birds. Some viruses are especially problematic in young birds, such as Psittacine Beak and Feather Disease Virus and polyomavirus. Before introducing new birds into a collection proper screening tools should be employed.

Mycotic (Fungal) Infections

Candida is frequently seen in neonates, as either a primary condition (usually in cockatiels) or secondary. Most mild cases will respond to nystatin, which does not get absorbed systemically, rather working by direct contact. It is very safe and some breeders routinely add it to their hand-feeding formulas as a preventative. More severe cases of candidiasis require systemic antifungals.

Aspergillosis is a disease of husbandry and caused by exposure to the fungal spores in the environment coupled with susceptibility, usually immunocompromise. Neonates are at a higher risk due to their developing immune system and the stresses of the hand-feeding process and weaning. Exposure to large amounts of fungal spores can cause an overwhelming case of aspergillosis in a neonate resulting in rapid death, rather than the chronic form seen in low grade, long term exposure in older birds. Treatment is with systemic antifungals.

Orthopedic Problems

Leg Deformities

Splay or Spraddle legs are commonly seen in neonates. This occurs when there is deformity in the legs with deviation outward, usually related to the stifle (knee), however hip changes can be seen. There are many potential

causes for the condition, including; trauma, inadequate substrate in the nest or brooder (especially if kept on a hard, slippery surface), metabolic bone disease or calcium, phosphorus or vitamin D3 imbalances. Tarsometarsus (hock) deviation can be seen when neonates are kept in a container with a rounded bottom. Poor nutrition can lead to greenstick fractures, folding fractures and other feet and leg deformities.

Correction of such conditions could include placing the bird in a bowl or deep cup padded with paper towels to prevent further slippage outward. Hobbles and splinting or taping the legs to a sponge or through holes in a foam traction device have been utilized with great success. These techniques have a much greater success rate if the condition is identified and treated while the bird is still early in development. Surgical intervention may be required in severe cases or in older birds that have nearly completed growth.

Constricted Toe/Annular Toe Deformity The etiology of this condition is unknown. Low humidity conditions or tags of egg membrane have been suggested as causes. It affects neonates and results from constricting bands of tissue around one or two toes, initially leading to swelling and then necrosis with resultant loss of the toe(s). Macaws seem to be especially affected. Treatment is either surgical correction or amputation. The constricting bands should be cut and removed, the swollen toe should be lanced and the serosanguineous fluid milked out. Bandaging of the toe with a pressure type wrap can aid in the prevention of refilling and antibiotics may be indicated. Persistence is required and the toe should be frequently checked to monitor progress. Unfortunately, most of the time veterinary assistance is sought the condition is so far advanced that amputation may be the only reasonable course of action.

Beak Abnormalities

Lateral Deviation of the Maxilla (upper beak)

This condition rarely develops from hand-feeding technique. If the beak begins deviation from the cere it could be due to an upper respiratory tract infection. Irregularities of the mandibular surface could also lead to deviation of the maxilla. Maxillary deviation is frequently seen in macaws. Treatment is through physical therapy, grinding of the occlusal surfaces or in severe cases, prostheses.

Mandibular prognathism (extended lower beak) **or maxillary brachygnathism** (undershot upper beak)

These conditions could be due to trauma or a developmental problem and may be potentiated by a calcium deficiency. It is seen frequently in cockatoos. Treatment is through digital manipulation or physical therapy before the beak is calcified. If the beak is calcified then acrylic prostheses are required.

Conclusion

I hope these comments prove useful if you or one of your family/friends have or are planning to purchase a baby bird. If I scared you a little bit then I accomplished one of my goals. Bird ownership is quite a responsibility and one that should not be taken lightly. There are many potential dangers that you need to be aware of and you should be prepared before making the commitment of tending to the care of these wonderful companion animals.