

Crop and Digestive Problems

Advanced Procedures for the Aviculturist

by Susanne Russo, Fort Lauderdale, Florida

It's 10 P.M. on a Saturday night and you have a baby that has GI stasis, what do you do? The vet office is closed until Monday, and this baby needs help now. What can you do? Or you've found a baby weak, dehydrated with a large bloated crop full of mucous fluid in the nest. It looked fine that morning, and now it is so weak it can't stand up. From past experiences you've always lost these babies. Along with the loss was the helpless and frustrated feeling of: 'what more could I have done?' Many times you can't take the risk of taking it to a vet for fear of the stress of the trip and handling will put the baby over the edge.

These are a just a few of the emergency type situations where you have to act quickly to give the baby the most beneficial supportive care possible, and to stabilize the system until you can get to your vet.

This article is not going to focus on the causes of these situations, but several advanced life saving procedures that every serious breeder should at least have the knowledge of and supplies to have on hand just in case. Being prepared in advance can make the difference between life and death.

Several of the more advanced emergency procedures require knowledge of how to do subcutaneous fluid therapy, emptying and flushing a crop, doing injectable medications, using

crop bras, and several other diagnostic techniques. The best source for being shown in advance of future problems, and obtaining the supplies needed for some of the emergency situations discussed in this article is from your vet. Develop a good relationship with your vet prior to any major life-threatening emergencies. Hopefully you may never have to use many of the emergency procedures mentioned below – but it is good to have the knowledge when needed.

GI (gastrointestinal) Stasis

One of the most dreaded situations a handfeeder can face is total crop and/or GI (gastrointestinal) stasis. Or the worse scenario would be a chick that has a bloated, over-stretched crop, with dehydration, chilled, and very scant black tarry

feces. This can happen in the nest, sometimes within hours. Simple common treatments will not help in these rare situations. In fact, the 'wait and see' approach will cost this type of chick its life. When found like this, the chick is in need of several advanced emergency procedures to save it.

The first priority with any sick chick is heat. If there is severe dehydration, humidity levels have to be available and higher. Heat and humidity are vital tools to help the chick conserve body reserves. The additional humidity will also help slow further dehydration. Thus, even with the proper heat, if a chick gets too dehydrated, not only does this effect body fluids, and organ function, but blood fluid volume is lessened.

All of this will contribute to the chick not being able to maintain it's own body heat. Also, if there is no digestion, and the chick has a full crop, this can be another source of body heat loss. Food that is in the crop will also use up precious body reserves to generate heat to both warm the crop contents and the body in contact with it. If there is little to no movement from the GI tract, crop contents should be removed to help the chick conserve body heat.

Probably the most common mistake that can be made is thinking it is the crop itself that is the problem. Rarely is this the case. In simple terms, the crop is a just holding reser-



A sour crop often looks like this.

Photo by Susanne Russo

voir for the food prior to entering the body and delivering food through the GI (gastrointestinal) tract. For illustrative purposes, think of the crop as the bowl part of a sink, and the entry to the body as the drain. If your sink is not draining, obviously there is a cause. It could be as simple as something poured down the drain that has slowed drainage, to something major such as a collapsed septic tank. With chicks it could be as simple as getting chilled, thus slowing digestion, to total GI stasis.

Many times infections (be it yeast or bacterial), dehydration, obstructions, etc. can prevent the crop from emptying. Problems can occur between the 'ingluvies' (crop) and 'supraduodenal loop' (intestine). The esophagus is at the base of the crop and it is the entry into the GI tract. Food will travel from the esophagus to the proventriculus, then the isthmus, and finally the ventriculus (gizzard) before entering the intestines. Problems can occur in any of these areas. When there is dehydration, infection, or impaction, this can also affect the efficiency of these organs. The worse the cause is, the slower the GI tract moves...thus slowing down, or preventing the crop from emptying. In summary, the crop is simply an external organ alerting you to an internal problem that needs to be corrected.

There are a couple of things you can do that act both as a diagnostic and supportive care that can help determine where the problem is.

First, you will need to empty and flush the crop, especially if it contains gassy, sour, contents. There are several ways to empty a crop, which either your vet or an experienced breeder can show you how to do properly. You can make simple crop emptying tool using a children's medicine syringe (has a larger opening at the tip) and a 5" length (using the closed end) of size 14 Fr.



The baby is being held in the left hand while the right thumb and forefinger gently pinch the gizzard.

Urethral catheter. Your vet may suggest some type of disinfectant, or even plain water to flush the crop. I personally have had good results using either plain baking soda or Alka-Seltzer (Original formula) as an effective flush. If using the Alka-Seltzer, you would dissolve a half tablet in a half-cup of warm water. Just a small amount (2cc) of this solution should be tubed/gavaged directly into the crop. Gently massage the crop tissues between your fingers. This will help to loosen up any yeast buildup on the interior crop skin. Use the crop-emptying syringe to suck this fluid out of the crop. If the fluid removed from the crop is very opaque (from food, or pale white flakes which would be yeast), flush the crop a second time. If a tiny bit of the Alka-Seltzer fluid does not suck out of the crop, there is no harm done, and it can be safely digested.

Once the crop is empty your next step should be to give the baby some fluids. Obviously if the crop is not moving at all you need another way to get the fluids into the body. The easiest way of doing this is by subcutaneous (SubQ) fluid therapy.

Your vet can show and advise you on the amounts to SubQ, the frequency, and which solutions to use (Lactated Ringers, with or without a dextrose solution), and the best locations (and proper direction) to inject the fluids.

In working with many slow crop and GI stasis problems I have found that SubQ fluid therapy has been one of the best lifesaving emergency procedures that a breeder should learn. SubQ fluids do several things. The solution is absorbed into the intestinal tract as a food. From the intestinal tract this fluid will also be absorbed and distributed within the body to help correct dehydration, increase organ function and blood fluid levels, thus helping them with some essential

tools to function more efficiently, also saving precious body reserves. A portion of the SubQ fluids is being used as food, which will also help with digestion and movement of the GI tract. This is especially helpful when there is almost total GI stasis, and the droppings are scant, black, and tarry. As long as this is in the digestive tract the body is still trying to draw what nutrients it can from it. There is little food value left, but there can be a very harmful build-up of pathogens that are being absorbed into the body. SubQ fluids can help to move some of this out of the intestines, thus greatly reducing the amount of harmful pathogens from being absorbed.

Note: It is important to discuss with your vet the amounts and frequency of the SubQ injections. With almost total GI stasis it can take up to 24 hours or more to see movement, and a change in the frequency, color, and amount of feces. The longer the problem has been, the longer it will take to correct it. With simple slow crop, though, digestive tract movement can be restored in as little as a few hours.

Another note: when doing

SubQ fluids always try to have the solution close to body temperature. The easiest way to do this is to fill the syringe, cap it, and submerge it in some hot/warm water for a minute.

SubQ fluid therapy can also act as a diagnostic to try and pinpoint where the problem may be. If you quickly see good digestive movement, and the feces are almost back to normal this is a very good indication that the problem is not in the intestines. If you put a little fluid in the crop, and it is not moving at all, then the problem is located between the intestines and the base of the crop. If you have an empty crop, and in doing the fluid therapy, the crop starts slowly filling up with fluids, then you either have a blockage, or a very bad infection going on. When fluid backs up into the crop try and suck this out with the crop syringe. This will prevent possible aspiration from the excess fluid draining into the crop. Also look at

what you have sucked out of the crop...is it clear, opaque and mucousy, or is there blood? If blood is noted, the color can give you an idea of how far internally the problem is. The browner the bloody fluid or feces the further up in the body the cause it. Each observation has a different meaning. Take careful notes from observations and discuss with your vet what course of additional treatment is needed.

Another simple diagnostic you can do to further try to get an idea of where to problem is is by feeling the action of the gizzard (ventriculus). Hold the baby upright and firmly as shown in the illustration. The gizzard is located below, and almost between the two lobes of the liver. It will look paler through the skin, and have a hard, muscular feel to it. You can watch the abdomen and actually see it move as it is grinding up food prior to entering the intestines. If you have several babies that are digesting normally you can look and

feel this area for comparison. Place your fingertips on either side of the hard mass to feel the contractions.

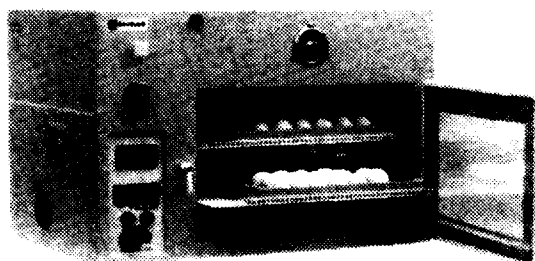
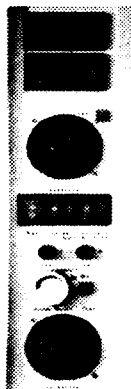
If the gizzard is functioning normally, you are going to feel good strong, rhythmic contractions. If there is an infection between the crop and the gizzard, contractions are going to be weak and infrequent. If the abdomen looks reddened and swollen, and the gizzard is doing hard contractions, there could be a bad infection, injury, or blockage at the beginning of the intestines.

With a blockage, fluids are essential to maintain hydration with hopes of moving the blockage. If there is a slight bit of crop movement, the use of digestive enzymes and lactulose will help dissolve or break-up the obstruction. If there is a suspected infection, injectable antibiotics must be used, especially if there is no crop emptying. Oral medications are of no help to the baby if it is unable to digest them.

Aside from Nystatin, which is a

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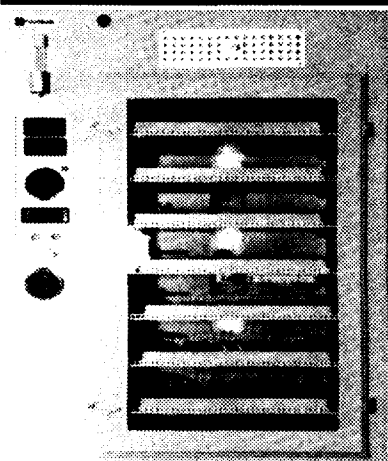
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contact drug, most antibiotics and antifungals have to be absorbed into the system and distributed thru the blood stream to organs, tissue, etc. to be effective. The intestinal tract is where this occurs, and if food is not reaching this area then the medicines are of no value to the bird. Discuss the symptoms with your vet, and ask what he/she recommends.

Once you start to see good digestion and some crop movement, please don't fill up the crop on the next feeding. Work up the amount fed over several feedings until you see that the crop is emptying completely. Preferably you would also like to see the crop empty between feedings. If the crop is not empty by the next scheduled feeding either you have fed too much, or there still is a problem going on inside.

Rather than put new food into a crop that already has food in it, I will empty the old food out of the crop. Many times the existing food in the crop may have already

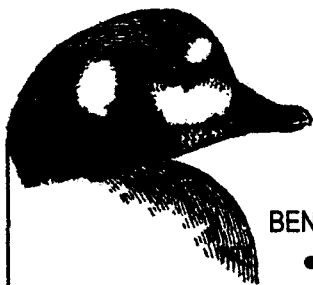
spoiled, and all that is accomplished by adding more food is contaminating the new food, thus compounding the problem.

If you feel it is neither the amount fed or an infection or other problem, examine the crop. Many times the crop tissues will get stretched which will give the crop a pendulous, sagging look when food is in it. This can result in food lying in the bottom of the crop and below the thoracic esophagus, which is the opening into the body at the base of the crop, thus preventing the crop from fully emptying. When this occurs a simple solution is something called a 'crop bra.'

A crop bra is a simple means of lifting and supporting the crop tissue. It acts to help keep the base of the crop level with the thoracic esophagus, which aids in the crop fully emptying. The added support will also take pressure off the over-stretched tissues, allowing time for them to shrink and gain back some elasticity.

This can take anywhere from less than a week to two to three weeks, depending on how badly the tissues were stretched. As the baby grows the bra should be checked and refitted if it gets too tight along the chest and abdomen. The illustration shows placement of the crop bra on a baby. Always make sure the baby is empty when fitting and adjusting the crop bra. This will reduce any risks of possible aspiration of from the crop contents. Once you remove the bra, feed smaller amounts for the first few feedings. If the crop still sags a little, apply the bra again for several more days.

Most babies will rarely require many of the procedures I have described above. Some babies may need only a crop bra to aid crop emptying. With other babies, when all other attempts fail with digestive problems, several of the described procedures can make the difference between life and death. Also, many of the things covered in this article can be applied to other situations, such as an adult that is weak and not eating, to renal problems, etc. Your vet can give you some sound advice and guidance on what to do and when to do it during an emergency. ♦



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