This Christmas season I had a very special gift to be thankful for – the gift of life – my dog’s life. Six months ago I was happily looking forward to breeding my first champion Wheaten bitch. She was such a steady, happy, delightful bitch and I was sure that her get would be the same. But then, in July, disaster struck. I relate this saga in the hope that it may help some of you avoid the same pitfalls, or in the possibility that, should someone find themselves in the same unfortunate circumstances, the method of treatment might help.

Auto-Immune hemolytic anemia (A.I.H.A.) is characterized by the body’s destruction of its own red blood cells (rbcs). Anemia can be mild to severe and life threatening. The factor initiating this hyper-immune self-destructive process often remains unknown, but some drugs, lead paint, certain lawn fertilizers, and routine vaccinations appear to be implicated. Here I describe a case of A.I.H.A. unresponsive to traditional treatment but successfully treated with human gamma-globulin (I.V.)

Blanche, my 3½ year old Wheaten Terrier, was the picture of health until last spring. She received her routine yearly vaccinations the middle of May and, during that period started picking at her food and was less active than normal, all of which I attributed to the onset of our “tropical” summer here in New Orleans. However, she lost three pounds over the next month and we took her to our veterinarian on July 1st.

At first glance the vet thought she was fine but (at our insistence) would observe her for a few hours. Five telephone calls from him in quick succession ended with a diagnosis of A.I.H.A. with a hematocrit of 9% (normal 35-55%). Blanche was immediately started on 25 mg prednisone per day with hematocrit reading every 4 hours around the clock. This was necessary since transfusion would be necessary to save her life if the hematocrit dipped to 8%. Transfusions are avoided in A.I. H. A. except to save the life of the patient because the transfused cells are quickly destroyed and may in fact increase the destructive process. To accomplish around the clock hematocrits (our veterinarian did not have acute care support at night) over the next two weeks we would pick Blanche up at 6 p.m., deliver her to the emergency clinic and then pick her up at 7 a.m. to take her back to our veterinarian. She became less active, lost weight, but was always glad to see us and went happily into the alternating clinics every 12 hours, making many friends along the way. Only once did she stop and look back as if to question whether or not she really had to do this again.

During the first week, her hematocrit did not improve as the prednisone was increased to a very high 60 mg. per day. On July 8th Immuran (azathioprine) 25 mg every other day, was initiated in addition to the prednisone. No improvement occurred and Blanche grew steadily weaker. We transferred to Louisiana State University School of Veterinary Medicine, whereon July 16th, a bone marrow collection was performed to pinpoint the problem. Results revealed that the bone marrow was producing red blood cells at a high rate but that these cells were being destroyed at a late maturation stage even before moving from the marrow into the vascular circulation; a very bad finding. Platelet production was only slightly depressed.

On the same day her hematocrit dipped to 8% and she was transfused with 100 ml cross matched packed rbcs. I was extremely glad we had avoided transfusion until we arrived at LSU where blood could be cross matched. I manage a hospital blood center and transfusion service and am aware that dogs have their own unique set of blood groups as do humans. There is no universal donor for dogs or humans; cross matched blood is much safer. Few local veterinarians have cross matching capabilities. As it was, Blanche experienced a febrile transfusion reaction caused by transfused white blood cells, characterized, as in humans, with chills and vomiting. Later, I sent LSU information on white blood cell depletion filters we use in the hospital to avoid febrile reactions in humans. As expected, the transfused
rbc's were quickly destroyed by Blanche's immune antibodies, hematocrit rising to 20%, but dropping to 12% by three days post transfusion. Most importantly, it bought Blanche some vital time.

On July 19th, Blanche was transfused with 20g human gamma-globulin (I.V.) over a 12 hour period as a last ditch treatment. This product, used to treat a variety of overactive immune states in humans, was obtained from a local hospital, and was expensive ($600). By July 22nd, her hematocrit had risen to 17%, a miracle as far as we were concerned. She was discharged on July 23rd with a prescribed medication of 60 mg prednisone per day and 25 mg Immuran every other day. Discharge recommendations were to reduce the prednisone by 50% in three weeks (hematocrit permitting), and then gradually taper off both immuno-suppressive drugs. Future administration of vaccinations and drugs are to be avoided whenever possible for the rest of her life.

Following discharge we reduced Blanche's prednisone by 50% after three weeks, then by 5 mg every 2-3 weeks following acceptable hematocrits until we reached a level of 10 mg per day. We then reduced Immuran by 50% on Dec. 12th. We currently plan to move Blanche entirely from prednisone but will probably continue 12 ½ mg Immuran every other day for a very long time, if not the rest of her life. Her hematocrit is currently 39%. An occasional platelet and white blood cell count should be performed since Immuran can suppress these cell levels. Blanche’s muscle tone, loss of weight and exuberance for life has returned and though she will never be bred, never produce those long awaited “perfect puppies,” the joy she has brought me these past few months makes it all worthwhile. Yes, I would do it again – even though the long term prognosis is unknown.

Blanche is in remission, not cured, but we are so happy that she has made it this far. The most probably factor that initiated her A.I. H.A., determined by a process of elimination, was her yearly vaccinations (See AKC Gazette, October 1996, p. 38), but this cannot be proven for certain. Over-vaccination of our dogs is currently a much debated topic.

A couple of final thoughts: Nothing is more important that temperament when our dogs are going through prolonged medical treatment. During the past six months, Blanche has had blood drawn every four hours for three weeks, bone marrow collection, transfusion, infusion, and she is still drawn every two-three weeks, yet she still loves to go to the vet to see her friends – always with her head up and tail wagging. By now, any dog with a less steady temperament would be suffering severe mental repercussions. Her breeder originally told me that Blanche’s sire produced happy, steady dispositions. She was so right.

Of very special value during such a prolonged ordeal were dog friends, more experienced that I, looking over my shoulder. I would become so focused on the immediate problem of the day with Blanche’s treatment that I would miss other aspects of care. Their knowledge and moral support were most helpful. There is no substitute for experience.

Post Script:

Blanche lived for approximately another 2 years. For the most part she was quite comfortable with no pain. We had a blood level, hct, performed weekly and when things weren’t going well, twice a week. We would wait for her results in order that we could make a decision on her medication dosage. We would gradually wean her down on her meds, then once we reached a low level, she would have a relapse, start destroying her red cells at a faster rate resulting in our increasing her meds back to their initial high level. We went through this cycle many times. However, it was important to try to keep her meds as low as possible due to the muscle damage caused by the high level of steroids. We would probably have given her another dose of immunoglobulin along the way even though second doses are usually not as effective as the first. However, at that time the FDA had messed up the supply of immunoglobulin resulting in some patients not even having access to it. It would have not been ethical to have used it on a dog at that time even though as a blood bank manager I probably could have obtained a dose.

It was rough waiting for those hct results knowing that the end could come very quickly as Blanche’s hct was barely over the level at which transfusion usually takes place. I did know when it was the end, too much muscle damage had occurred and she suddenly lost her spark to live. She did have a couple of extra good years for the most part. Taking responsibility for the bad times goes along with the responsibility of owning a dog.