



ANESTHESIA FOR IRISH WOLFHOUNDS ... MY PROTOCOL

by Dr. Regine Vandamme

As owner, breeder and veterinarian, I am often asked about the best protocol for anesthesia of Irish Wolfhounds.

It took me years to develop a basic protocol for Irish Wolfhounds, easily adaptable for specific cases that may arise in a veterinary practice. In general, I can say that the protocol that I use for Irish Wolfhounds during routine interventions is easy to use and very safe.

I must say that this protocol is very personal, that it has been proven in my practice and that I would not easily use another procedure. After all these years, I can make a much more precise decision if necessary because I am very familiar with the reactions and the side effects.

Some of the guidelines and dosages I use are different from what the pharmaceutical industry advocates. In all cases, the quantities are much lower than those recommended. The idea is that the bigger the dog, the less you need per kilo of body weight to get the same effect as a poodle for example. To get the dosages of the anesthetic products one would have to actually use the body surface measurements and not the body weight, but as it is not easy to calculate, the indications are usually given according to the body weight, which makes a big difference in big dogs like ours.

Of course, a general health assessment is necessary before starting anesthesia. This includes of course heart health, (frequency and rhythm). Also, look at the mucosae, an easy and very useful tool that can give a lot of clues about the general condition of your patient. In cases where hepatic or renal failure may be present a complete blood count and blood biochemistry should be done 48 hours before the procedure as this may have an impact on the volume of anesthesia. If possible, of course, it is best if the dog is fasting for 8 hours. Dogs can drink up to 4 hours before surgery. Obviously, in emergency cases, we will not always have these ideal conditions and we will have to deal with it....

I always give caprofen or methadone before starting anesthesia. It is scientifically proven that the analgesic must be given before pain occurs. In addition, the analgesic will have a positive influence on the anesthesia in that you will use much less drugs to achieve the same result. Reducing doses is also one of the goals we need to keep in mind for an optimal protocol.

As a matter of safety, I install a catheter in the vein of one of the front legs. It is necessary for anesthesia but it is also necessary as a 'first line' if something goes wrong. For Irish Wolfhounds I use an 18-gauge catheter, which is the one that is the easiest to use. It is quite long and stays well in the vein if attached correctly.

All stages of anesthesia I do next will be done through this catheter. It is fast, straightforward and you can introduce the products gradually if necessary and work according to the dog's reactions. This is particularly important for patients with renal insufficiency or for bitches delivering by caesarean section. The body weight of these patients is of course not representative because it is necessary to reduce the body weight of puppies...

Example of anesthesia of a dog weighing more than 45 kg (I believe this is the case for 90% of adult Irish Wolfhounds)

1- I begin with 0.5 ml of dexdomitor (dexmedetomidine hydrochloride) intravenously. NEVER give more. In fact, this is the recommended dose for a 25 kg dog if given intramuscularly. As you can see, this is a very small dose, but for the Irish Wolfhound, that's enough. Wait 3 minutes for the product to take effect. Some dogs can very well be manipulated for minor surgery, for example removing a small skin tumor or managing skin wounds (*of course with local anesthesia*).

2- I then use propofol. It is a very safe product if used correctly (*especially not like Michael Jackson*). In Europe, propofol is available in 2 strengths, 10% and 20%. The dosage is 4 ml of propofol 10% per 10 kg of body weight or 2 ml of propofol 20% per 10 kg of body weight.

As both concentrations are available, I first give 6 ml of 20% propofol (*which covers the first 30 kg of body weight*) then I use propofol 10% to control the deeper anesthesia. The lower concentration of the product allows to dose the amount depending on the effect obtained (*looking at the reflexes of the eyes*), so that the necessary volume can be better controlled (*think pregnant bitches and dogs with renal or hepatic insufficiency*) and that you will have more efficiency.

Possible Side Effects:

- Dogs do a little 'cycling' with the forelegs: this means that TOO LITTLE propofol has been given. To add, because of its flexibility, I use propofol 10% here.
- A respiratory arrest can occur (this means that the dog does not breathe for about 20 seconds but will recover during the next 20 seconds).

Propofol causes short-term anesthesia, so it will not be sufficient for caesarean section or sterilization.

In cases of longer surgery, propofol is used to insert the tracheal cannula needed for gas anesthesia.

EXCEPTION for Caesarean Delivery:

Propofol is a very safe product that does not reach the uterus. During caesareans, I use propofol until I open the abdomen and see the uterus with puppies. From this moment, I start gas anesthesia (isoflurane), but I try not to use the gas too early because it could harm the puppies. This means that you have to give propofol as a drop for a while when you open the abdomen. Once you can reach the puppies, gas anesthesia can be safely increased. For a caesarean section I DO NOT give DEXDOMITOR® (dexmedetomidine) to begin with, I start immediately with propofol and I will have to give a little more, (always monitoring the effects). The result is that the puppies will be very awake after the caesarean section and will have almost no influence from the anesthetic.

3- Gas anesthesia (oxygen with isoflurane or sevoflurane) is used for major surgeries. If steps 1 and 2 are properly performed, the anesthesia can last several hours without problems as in the case of abdominal surgery, orthopedic surgery or serious accident.

If the protocol is followed correctly, it will reduce the use of gas anesthesia or the quantity of products, which is of course always the goal of good anesthesia. This will also allow a good and quick recovery of the patient.

Some dogs will walk around and be very awake half an hour after the surgery. In the case of our big dogs, this is an important issue, because if dogs panic, they can easily hurt themselves and big dogs are not easy to handle if they do so. Also in the case of caesarean section it is good that the dog recovers without panic, it facilitates the acceptance of newborns.

At the end of the operation, I leave the tracheal cannula in place (with the cuff deflated) until the dog gives the tracheal reflex, then I extract it quickly (the cuff is deflated so it is easy and quick). The dog must be fully oxygenated after surgery, to facilitate a quick return to health.

Some will see a problem with the high volume of propofol used in this protocol but the fact that you can use it in larger amounts because of the % also means that you can easily dose it and the chance that you give too much is very low.

For me, it is a very good protocol. I can understand that some veterinarians have other protocols with which they feel good and it is in any case safer to use a known protocol with which one is familiar than to use a protocol with which one does not feel well. This protocol may look a little 'chaotic' but if applied as written here it is extremely simple and has already proven to be safe for Irish Wolfhounds.

I want to say one last word about the DEXDOMITOR®. It was the first product on the market in the alfa-2 agonist category. Other similar products have since been added, but these do not, in my opinion, produce the same effect on dogs as the dexdomitor. The reason could be in the molecular structure of the product, slightly different from that of competing products. I feel that the effect of dexdomitor is better and more productive than other molecules such as Sedator or Medetor). This opinion is based on my experiences, and this is especially noticeable in large dogs.

