

Canine Breed Specific Anesthesia Needs

Dogs with the MDR-1 mutation

This genetic mutation has been detected in a number of different dog breeds. For more information about the mutation and affected breeds go to:

<http://www.vetmed.wsu.edu/depts-VCPL/drugs.aspx>

A link has been suggested between this gene mutation and sensitivity to certain drugs. There is strong scientific evidence on the hazards of ivermectin administration to these dogs. Unfortunately there is no scientific data to support the suggested link between this gene mutation and the use of acepromazine and butorphanol. These are two commonly used drugs in veterinary anesthesia in a wide range of doses usually in combination with other drugs. So it is not possible to create a strong cause-and-effect link. I do not alter my anesthesia protocol in dogs known to possess the MDR1 mutation.

Sighthounds

They represent a wide array of dog breeds all descended from the same ancestor and include:

Greyhounds,

Whippets

Salukis

Pharaoh Hounds

Deer Hounds

Wolf Hounds

Ibizen Hounds

Borzois

Afghan Hounds

Belgian Shepherd (tervueren)

As a group, these dogs share a very reduced ability to metabolize thiobarbiturates and so their sleep time from this class of drug is prolonged. Alternatives to thiobarbiturate anesthesia exist and so the problem is easy to avoid.

Boxer dogs

Some lines/strains of Boxers that have originated in Commonwealth countries have an sensitivity to the tranquilizer acepromazine. Acepromazine administration even at very low doses can result in a profound drop in heart rate and collapse. Unfortunately, there is no detectable physical characteristic or pre-anesthesia blood test (yet) to identify individual dogs that are predisposed to this sensitivity. Therefore I do not administer acepromazine to Boxer dogs.