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VEC CARDIAC NEWS

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Imidapril (Prilium) has recently been released in Canada. Imidapril is an angiotensin converting enzyme inhibitor (ACEi). ACEi are a class of drugs that prevent the conversion of angiotensin I to angiotensin II by blocking angiotensin converting enzyme (ACE). ACE is present within the lungs and is typically activated by renin release by the kidneys resulting from hypotension and sympathetic stimulation. Angiotensin II is a vasoconstrictor and causes release of aldosterone which in turn causes sodium and water retention. Angiotensin II has also been demonstrated to produce ventricular myocyte necrosis, remodeling and fibrosis, as well as upregulation of the sympathetic nervous system in heart failure. Therefore, angiotensin II activation exacerbates congestion and myocardial failure.

ACEi have been proven to increase survival in dogs that develop congestive heart failure secondary to mitral valve disease. Most cardiologists support their use in congestive heart failure secondary to dilated cardiomyopathy in dogs. These drugs should not be used in place of furosemide and pimobendan in these diseases, but rather as combination therapy.

Other areas in which ACEi may be appropriate include treatment of dilated cardiomyopathy before the onset of congestive heart failure and in most cats with congestive heart failure. (More studies are required to fully elucidate the appropriate use of ACEi in these scenarios). Finally, some cardiologists support the use of ACEi in late stage mitral valve disease before the onset of congestive heart failure. This use of ACEi in this setting is still very controversial at this time and I do not currently recommend the use of ACEi in this setting unless complicating factors are present. [ACEi may also have some benefits in certain kidney diseases (hypertension and protein-losing disease).]

Smaller studies have demonstrated that imidapril is as effective as both benazepril and enalapril in dogs. It has also been shown to be safe and effective in cats. The veterinary preparation of imidapril, Prilium, is a liquid that is odorless and tasteless. I have found it to be very useful in patients that are difficult to pill, and in animals with doses between the pill sizes, as well as in animals with some degree of azotemia as it can be titrated easily.

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