

Combination Therapies for PLE: Which Is Best?

Protein-losing enteropathy (PLE) can arise as a consequence of chronic enteropathy in dogs and, if so, usually carries a guarded prognosis. Immunosuppressive therapy with prednisolone and azathioprine is commonly recommended; however, azathioprine is associated with undesirable effects. Chlorambucil, by contrast, is widely used in treating chronic enteropathies in cats and has been well tolerated and efficacious. This case study compared efficacy of azathioprine versus chlorambucil versus both in combination with prednisolone for treatment of PLE in dogs ($n = 27$). Dogs in group A ($n = 13$) received prednisolone (2 mg/kg PO q24h) and azathioprine (2 mg/kg PO q24h), and group C dogs ($n = 14$) received prednisolone (1–2 mg/kg PO q24h) and chlorambucil (4–6 mg/m² PO q24h). Treatment response was assessed and immunosuppressive medication tapered gradually at 2–4 week intervals. Response was significantly better in

group C than group A. After 2 weeks, serum albumin concentration increased by 36% in group A and 56% in group C. Clinical signs (including body weight) improved in 6 dogs in group A and 12 in group C. Median survival time for group A was 30 days whereas median survival time was not reached in group C. At study end, 2 dogs from group A were still alive compared to 10 from group C. Results suggested combination therapy with chlorambucil and prednisolone is more effective in treating PLE in dogs than azathioprine and prednisolone.

■ Commentary

PLE treatment can be quite frustrating because of the guarded prognosis. After diagnosis, the decision of which drug combination to initiate can be difficult. This study is relevant because the combination of chlorambucil–prednisolone has steadily gained popularity because of the perceived

improved efficacy. This study provided more evidence that the combination is likely more effective than azathioprine–prednisolone; however, the role of cyclosporine in PLE treatment was not addressed. Multimodal therapies are often necessary in severe cases, and 3 immunosuppressant medications are typically required for disease control. Still, determining medication order can be a challenge, but based on these results and other anecdotal evidence, I recommend the combination of chlorambucil–prednisolone as the initial therapy in severe cases of PLE.—*Dara Zerrenner, VMD, MS, DACVIM*

■ ■ Source

Comparison of a chlorambucil-prednisolone combination with an azathioprine-prednisolone combination for treatment of chronic enteropathy with concurrent protein-losing enteropathy in dogs: 27 cases (2007–2010). Dandrieux JR, Noble PJ, Scase TJ, et al. *JAVMA* 242:1705-1714, 2013.

Another Avenue for Cranial Cruciate Ligament Rupture

Multiple surgical options exist for cranial cruciate ligament rupture (CrCL): intra-capsular and extracapsular stabilization and osteotomies. Potential postoperative complications may include infection, implant failure, and progression of osteoarthritis of the stifle joint. Ten dogs with spontaneously occurring CrCL rupture were investigated to assess the benefit of postoperative intraarticular autologous platelet concentrates (PC). Pre- and postoperative assessment included orthopedic examination, radiographic examination, and force plate gait analysis. All underwent ligament replacement by fascia lata autograft guided by arthroscopy. All received a single dose of tramadol hydrochloride postoperatively, and firocoxib was administered for 7 days; none received physiotherapy. Six dogs received 3 intraarticular injections of PC (1 immediately postoperatively, 2 additional injections at 2-week

intervals). The remaining dogs received oral chondroitin sulfate, glucosamine, ascorbic acid, and manganese sulfate at the same treatment points as the PC group. In postoperative evaluation, no significant differences between the PC and control groups were noted on radiographic analysis. Peak vertical reaction force and vertical impulse were significantly increased on the ninetieth postoperative day compared with the control group; no improvement was noted in the control group. Results suggested some benefit of autologous PC to improve postoperative functionality, but further studies are warranted.

■ Commentary

CrCL rupture is regarded as a degenerative condition in the majority (95%) of dogs. Surgical strategies are focused on stabilizing measures, but none return dogs to pre-existing or pain-free, long-term function.¹

Studies suggest that joint biology and regenerative medical approaches may result in improved patient outcomes. Despite significant limitations, these data offer the potential to improve current strategies using novel biologic approaches for a challenging orthopedic condition.—*Jason Bleedorn, DVM, DACVS*

■ ■ Source

Intra-articular injections of autologous platelet concentrates in dogs with surgical reparation of cranial cruciate ligament rupture: A pilot study. Silva RF, Carmona JU, Rezende CMF. *VET COMP ORTHOP TRAUMATOL* 4:285-290, 2013.

1. Comparison of long-term outcomes associated with three surgical techniques for treatment of cranial cruciate ligament disease in dogs. Christopher SA, Beetem J, Cook JL. *VET SURG* 42:329-334, 2013.