

## **Cyclosporine-Induced Peripheral Neurotoxicity in Canine Renal Transplantation**

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Cyclosporine A(CsA) is a potent immunosuppressive agent that is used widely in organ transplantation. However, administration of CsA is associated with a number of complications, such as nephrotoxicity, hepatotoxicity, hypertension, gingival overgrowth, neurotoxicity. In this report, a renal transplanted dog shown a unpredictable peripheral neuropathy in the setting of therapeutic blood levels of CsA (400-700 ng/ml) is described. Three-year-old mongrel dog undergone standard heterotopic renal transplantation showed signs of lameness in the front legs and a complete paralysis in the hind legs 21months after surgery. CBC results revealed mild anemia. However, other serum biochemical values including BUN, Creatinine were normal. X-ray and ultrasonography showed no specific signs of graft rejection. Cervical puncture with cerebrospinal fluid examination revealed no signs of neuroinfection. Magnetic resonance imaging of the brain and spinal cord were unremarkable.

We diagnosed the dog as a CsA-induced peripheral neuropathy according to the above results, history and clinical signs. In order to treat neuropathy, the dose of CsA was reduced. Although clinical symptoms was relieved after reducing CsA dose(complete paralysis to paresis of hind leg), the dog died of acute renal failure, result of graft rejection.

In conclusion, if CsA is choosen as a immunosuppressive agent, it is necessary that patients should be closely monitored for possible peripheral neurotoxicity.

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