USE OF NUTRACEUTICALS TO MANAGE LIVER DISEASE IN BEARDED DRAGONS (*Pogona vitticeps*)

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ABSTRACT

Liver disease in bearded dragons may have many etiologies. Hepatitis and hepatopathies may be caused by bacteria, protozoa or by atadenovirus infection.[6] Hepatic lipidosis is found in some obese adults. It is a metabolic derangement rather than a single clinical process.[2,5] It is often seen in dragons fed an exclusive high-fat diet (such as waxworms, mealworms), but may also be seen in obese dragons fed a recommended diet of salad daily and crickets 2-3 times a week.[1,10] Obesity includes an increase in the coelomic fat bodies as well as liver fat. Lack of exercise may play a role in obesity. Liver disease should be treated per etiology. Adjunctive therapy to support liver function includes nutraceuticals and most notably milk thistle (silymarin or silybin).[9] Lactulose has been used to decrease the ammonia within the gastrointestinal tract in mammals and birds, but a study evaluating the effectiveness in dragons with liver disease has not been done. This also applies to L-carnitine and milk thistle. Usage is extrapolated from use in other species. L-carnitine improves the transportation of acyl-coenzyme A (CoA) across the inner mitochondrial membrane of hepatocytes.[2,3,5] Supplementation may improve hepatic metabolism of fat. The dosage recommended in reptiles is 250 mg/kg orally daily.[2,5] Milk thistle is regarded as a liver protectant may improve general liver function.[4,7,8] Dosage is empirical. Choline and methionine supplementation has long been used for liver disease, however studies in rats have shown them to be ineffective. Usage is likely safe at 40-50 mg/kg orally daily.[2,5]

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