Hyperparathyroidism in Cats

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Hyperparathyroidism is a condition in which the parathyroid glands (not the thyroid glands!) produce too much parathyroid hormone. Parathyroid hormone is responsible for maintaining the correct balance of calcium and phosphorous in the blood. If blood calcium is low, the parathyroid hormone level increases, which causes calcium to be taken out of the bone to maintain the correct calcium level in the blood and other tissues.

The parathyroid glands are located adjacent to or actually inside of the thyroid glands in the neck. There are two types of hyperparathyroidism.

Primary hyperparathyroidism

Primary hyperparathyroidism occurs when one or more of the parathyroid glands becomes cancerous or abnormally produces excess parathyroid hormone. This causes the calcium levels in the blood to be higher than normal. Primary hyperparathyroidism is generally seen in older animals and is more common in dogs than cats.

Animals with primary hyperparathyroidism may lose their appetite, vomit, drink and urinate more, and may appear drowsy or listless. The signs often come on gradually and considerable organ damage may occur before the animal shows significant symptoms.

The treatment of primary hyperparathyroidism is removal of the abnormal or cancerous gland. The removal of the gland causes a sudden decrease in the amount of parathyroid hormone, and there is a corresponding sudden drop in the blood calcium level. For this reason, the animal must be monitored closely after surgery and given calcium if the level becomes too low.

Secondary (nutritional) hyperparathyroidism

Secondary hyperparathyroidism is more common and occurs most frequently in kittens and puppies fed an all-meat or organ diet (such as all liver) or a diet with an imbalance of calcium and phosphorous. Meat contains an excess of phosphorous and inadequate amounts of calcium. Although cats and dogs are carnivores, they not only eat meat, but the bones as well, which supply the needed calcium and help to create a better calcium and phosphorous balance.

In secondary hyperparathyroidism, because the calcium intake is low, the parathyroid gland produces more parathyroid hormone, and calcium is removed from the bones.

Kittens and puppies with secondary hyperparathyroidism are often reluctant to move, may stand splay-legged, and may easily develop fractures because of the thinning of the bones. The changes in the density of the bones often cause abnormal growth, especially in the spinal column and pelvis. This places stress on the joints and can result in arthritis.

Treatment basically involves placing the animal on a balanced diet. The skeletal deformities are generally permanent and cannot be corrected.

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