

PARATHYROID TUMOURS AND HYPERPARATHYROIDISM

The parathyroid glands are small but vital structures located near the thyroid glands in the neck. They help regulate calcium levels in the bloodstream by producing a hormone called parathyroid hormone (PTH).

When blood calcium levels drop, the parathyroid glands release PTH, which acts on the bones, kidneys, and intestines to raise calcium levels.

A parathyroid tumour can cause the glands to secrete excessive amounts of PTH, leading to **hypercalcemia**—a condition where calcium levels become too high.

This can affect your pet's kidneys, muscles, digestive system, and nervous system.

Parathyroid tumours are uncommon, and the cause is often unknown.

However, a genetic predisposition exists in some breeds, such as Keeshonds.

These tumours are usually benign and affect only one gland.

Signs and Symptoms

Parathyroid tumours are not visible externally.

Symptoms are usually due to the **high calcium levels** they cause, including:

- Increased thirst and urination
- Loss of appetite
- Vomiting or constipation
- Weakness or lethargy
- Development of urinary stones
- In rare cases, seizures or other neurological signs

These signs may be subtle and mistaken for normal ageing, which is why routine blood tests are so valuable in early detection.

Diagnosis

The diagnosis of a parathyroid tumour typically involves:

- **Blood tests:** Elevated blood calcium levels (hypercalcemia)
- **Hormone testing:** Blood levels of PTH and PTH-related protein (PTHrP) help determine the source of the calcium imbalance. Elevated PTH in the presence of hypercalcemia strongly suggests a parathyroid tumour.
- **Imaging:** Ultrasound or CT scans are used to locate and assess the tumour. These tests help guide treatment decisions.

Treatment Options

There are two primary treatment options:

1. Surgical Removal (Parathyroidectomy)

This is the most common and effective treatment for solitary parathyroid tumours. The tumour is removed through an incision in the neck. The remaining glands, which have been suppressed by high calcium levels, gradually regain function.

2. Ultrasound-Guided Ethanol Ablation

This is a minimally invasive option where ethanol is injected into the tumour under ultrasound guidance to destroy it. It's an alternative for patients who may not be ideal surgical candidates. Repeat treatments may be needed if the tumour is not fully destroyed.

Aftercare and Monitoring

After surgery or ablation, the most important concern is the risk of **hypocalcemia** (low blood calcium) as the remaining glands begin to function again. This can cause:

- Tremors or twitching
- Muscle cramping
- Seizures
- Lethargy or collapse

Your pet's calcium levels will be monitored closely post-procedure. Temporary calcium and/or vitamin D supplementation may be prescribed to prevent complications. This is usually weaned as the glands recover.

Prognosis

- **Excellent long-term prognosis** is expected if the tumour is removed successfully.
- Parathyroid tumours are typically benign and rarely recur.
- Lifelong medication is not usually required, though some pets may need ongoing monitoring of calcium levels.
- With timely treatment and appropriate follow-up, most pets make a full recovery.