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FELINE PANCREATITIS: DIAGNOSTIC STRATEGIES IN VETERINARY PRACTICE.

Germán Pérez Muñoz
Kato feline clinic
C/ Austria 7. Edif V Centenario. 4107 Seville.
Spain

INTRODUCTION

Pancreatitis is an inflammatory disease of the exocrine pancreas and is the most common pancreatic disorder in domestic cats. Despite its relevance, it continues to be a diagnostic challenge in daily clinical practice due to the non-specific nature of its clinical signs and the absence of a definitive in vivo test. In post-mortem histopathological studies, up to two-thirds of the cats examined had lesions consistent with pancreatitis, many of which were chronic and clinically silent[12]. In clinical practice, however, the number of confirmed diagnoses is significantly lower.

The pathophysiology of feline pancreatitis involves the intrapancreatic activation of digestive enzymes, mainly trypsin, which causes self-digestion of the pancreatic parenchyma, local inflammation and fat necrosis[3]. In cats, unlike dogs, the chronic form of low intensity predominates, which progresses slowly and leads to fibrosis and progressive loss of exocrine and even endocrine pancreatic function[4]. Coexistence with cholangitis and inflammatory bowel disease is so common that the term triaditis has become established in the literature[5]. This phenomenon is explained by the particular anatomy of cats, in which the pancreatic and bile ducts usually converge in the same duodenal orifice, which favours the spread of inflammation.

Histopathological diagnosis remains the gold standard, but it is rarely used in clinical practice due to its invasive nature and the anaesthetic risk it poses in compromised patients. Therefore, in daily practice, diagnosis is based on the integration of medical history, physical examination, laboratory tests, pancreatic biomarkers, and advanced imaging techniques.

CLINICAL SIGNS

The clinical signs of feline pancreatitis are notoriously non-specific. Unlike dogs, where acute abdominal pain and profuse vomiting are characteristic, cats show much more subtle manifestations. This explains the high rate of underdiagnosis in daily practice[8].

Among the signs observed by owners are: partial anorexia or hyporexia, selective rejection of certain foods, intermittent vomiting of undigested food, progressive weight loss, lethargy and decreased social interaction. Some cats exhibit bruxism (teeth grinding), interpreted as a manifestation of visceral pain or nausea, which can confuse the clinician if there is no obvious dental disease.

Physical examination findings include poor body condition or cachexia, variable dehydration, poorly localised abdominal pain, fever or hypothermia, and jaundice in cases of associated cholangitis. In geriatric patients, pancreatitis often coexists with chronic kidney disease, adding to the difficulty of diagnosis[10].

DIAGNOSTIC TESTS

The diagnosis of feline pancreatitis requires a multimodal approach, as no single test is definitive[11].

Conventional serum enzymes: Conventional serum amylase and lipase measurements are not useful in cats, as they originate from multiple tissues such as the intestine, liver and kidney. They do not specifically reflect pancreatic activity, and histopathological studies have shown no correlation between their values and the presence of pancreatitis[12].

Specific immunoassays: Spec fPL (quantitative feline pancreatic lipase-specific ELISA) is considered the in vitro standard. Its reference values are ≤3.5 µg/L (normal), 3.6–5.3 µg/L (grey area) and ≥5.4 µg/L (compatible). Its sensitivity ranges from 57–79% and its specificity from 63–82%[13]. SNAP fPL is an in-clinic qualitative immunoassay with positive/negative results, useful for screening. Its sensitivity is 54% in mild cases and its specificity is 82% in severe cases.
%.[13]. SNAP fPL is an in-clinic qualitative immunoassay with positive/negative results, useful for screening. Its sensitivity reaches 54% in mild forms and up to 100% in moderate-severe forms, with specificity of 67–100 %.

DGGR assays: Methods based on the DGGR substrate (1,2-o-dilauryl-rac-glycero-3-glutaric acid ester) have been used in multiple laboratories. Although they offer good reproducibility, their limitation is that they are not specific to pancreatic origin and can detect extrapancreatic lipases[15].

In-clinic quantitative pancreatic lipase: In-clinic quantitative assays based on optimised DGGR represent a significant advance, as they have been validated to specifically detect pancreatic lipase. They have shown a high correlation with specific immunoassays (r=0.96), a diagnostic concordance of close to 87% and excellent precision (CV <10%)[16]. Their feline reference ranges allow the diagnostic probability to be stratified: ≤4.4 U/L unlikely, 4.5–8.7 U/L possible, ≥8.8 U/L compatible. The great advantage is the speed of obtaining the result and the possibility of serial monitoring in the clinic.

Imaging: abdominal ultrasound is the most commonly used imaging technique. Findings include pancreatic hypoechogenicity, peripancreatic hyperechogenicity, and ductal dilatation. Its sensitivity varies between 24% and 67%, highly dependent on the experience of the sonographer, while specificity is higher but not absolute[17]. Contrast-enhanced CT can improve the assessment of pancreatic ducts and chronic lesions.

Cytology, biopsy, and urinalysis: ultrasound-guided fine-needle aspiration of the pancreas is considered safe, with complication rates similar to controls (~11%). Cytological yield is around 67%, with 86% concordance with histology[18]. Its main use is to rule out neoplasms. Pancreatic biopsy is reserved for selected cases due to its invasive nature. Urinalysis, although not specific, complements the interpretation, especially in older cats with concurrent renal disease[19].

CLINICAL CASES

Case 1 – Arturito (diagnosis): 16-year-old European cat referred for progressive weight loss, recurrent vomiting, and bruxism. Physical examination revealed poor body condition (4/9) and mild dehydration. Laboratory tests: mild anaemia, stress lymphopenia, creatinine 2.0 mg/dL, BUN 67 mg/dL; urinalysis: specific gravity 1.017. Quantitative lipase was 21.8 U/L, consistent with pancreatitis. Ultrasound showed intestinal thickening and renal pelvis dilation. The integration of findings confirmed chronic pancreatitis[20].

Case 2 – Lunera (monitoring): 19-year-old European cat with recurrent vomiting. Between 2020 and 2022, she had several positive SNAP fPL tests, confirming pancreatitis but without the possibility of follow-up. From 2025 onwards, in-clinic quantification was incorporated, allowing objective monitoring: January 11.7 U/L, March 40.3 U/L, September >50 U/L. These values correlated with episodes of anorexia and vomiting. Monitoring allowed treatment and nutrition to be adjusted, improving the prognosis[21].

DISCUSSION

Feline pancreatitis continues to be a diagnostic challenge. Clinical non-specificity, variability in ultrasound findings, and the limitations of each test justify the need for a multimodal approach[22].

Conventional enzymes should be discarded from the feline diagnostic arsenal. Immunoassays (Spec fPL, SNAP fPL) represent a substantial advance, but they have limitations: the former requires an external laboratory and the latter is qualitative. In-clinic quantitative assays based on optimised DGGR provide speed, validated specificity, and the possibility of monitoring, which is essential in chronic pancreatitis[23].

It should be remembered that not all lipase elevations imply clinical pancreatitis. False positives occur in cats with chronic kidney disease, liver disease, and abdominal neoplasms[24]. Therefore, interpreting values in isolation is dangerous. They should always be correlated with clinical signs and imaging tests.

Triaditis is a key element in daily practice. Many patients present with pancreatitis associated with cholangitis and chronic enteropathy. This overlap explains the diversity of clinical manifestations and highlights the need for objective biomarkers. In this context, quantitative lipase is an especially valuable tool.

The clinical cases illustrate two common scenarios: the initial diagnosis in a cat with non-specific signs (Arturito) and serial monitoring in a geriatric cat with chronic disease (Lunera). Both illustrate how diagnostic advances directly impact clinical decision-making.

CONCLUSIONS

- Feline pancreatitis is a common but difficult-to-diagnose disease.
- Clinical non-specificity requires the use of specific tests and a multimodal approach.
- Conventional serum amylase and lipase lack diagnostic value in cats.
- SNAP fPL is useful as a rapid screening test; Spec fPL remains the gold standard in the laboratory.
- In-clinic quantitative assays based on optimised DGGR offer speed, specificity and serial monitoring.
- Quantitative lipase not only diagnoses, but is also essential for monitoring chronic cases.
- Triaditis and other comorbidities require results to be interpreted within the full clinical context.

BIBLIOGRAPHICAL REFERENCES

1. Xenoulis PG, Steiner JM. Canine and feline pancreatitis. Vet Clin North Am Small Anim Pract. 2012.
2. Bazelle J, Watson P. Pancreatitis in cats: is it acute, is it chronic, is it significant? J Feline Med Surg. 2014.
3. Williams DA. Feline exocrine pancreatic disorders. Vet Clin North Am Small Anim Pract. 2013.
4. Park H, et al. Pancreatitis in cats: a retrospective study. J Comp Pathol. 2020.
5. De Cock HEV, et al. Pancreatitis in cats: a retrospective study of 40 cases (1986–1995). J Vet Intern Med. 2001.
6. Xenoulis PG, Suchodolski JS, Steiner JM. Chronic pancreatitis in cats. J Vet Intern Med. 2010.
7. Crain SM, et al. Safety of ultrasound-guided fine-needle aspiration of the feline pancreas. J Feline Med Surg. 2014.
8. Mansfield C. Feline pancreatitis: a clinical update. Top Companion Anim Med. 2012.
9. Steiner JM, et al. Sensitivity and specificity of Spec fPL and SNAP fPL in cats. J Vet Intern Med. 2009.
10. Parra A, Soto F. Feline pancreatitis: diagnosis and treatment. Rev Clín Vet. 2020.
11. Understanding lipase assays in veterinary medicine. J Am Vet Med Assoc. 2022.
12. IDEXX Catalyst Pancreatic Lipase White Paper. 2022.
13. Forcada Y, et al. Evaluation of diagnostic markers in feline pancreatitis. Vet J. 2008.
14. Xenoulis PG, Steiner JM. Laboratory diagnosis of feline pancreatitis. Vet Focus. 2015.
15. Gori E, et al. DGGR-based assays for feline pancreatitis. Res Vet Sci. 2016.