

# PAROXYSMAL DYSKINESIA IN THE DOG

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## INTRODUCTION

Paroxysmal Dyskinesia (PD) is a group of diseases of the central nervous system<sup>1</sup>. They are characterized by an abnormal involuntary motor activity and an increase in muscle tone without presenting autonomous signs, EEG abnormalities or changes in the state of consciousness<sup>1, 2, 3</sup>.

Even though multiple etiologies of PD are described<sup>1</sup>, this study is focused on the approach to Paroxysmal Gluten Sensitive Dyskinesia (PGSD).

## OBJECTIVES

- 1. Describe a clinical case of PGSD.
- 2. Bibliographic review of PGSD.

## CLINICAL CASE

A 11-year-old mixed-breed, spayed female was presented for chronic and intermittent digestive signs and neurological alterations.

❖**Physical exam:** Body condition (4/9) and presence pasty faeces on anal palpation. A neurological exam was also perform, which was completely normal.

❖**Treatment:** Dietary trial with an hypoallergenic diet (Royal Canin).

❖**CBC and biochemistry:** Table 1.

❖**Thorax X-ray and abdominal ultrasound:** No abnormalities.

❖**Owner’s video record:** Fig. 1.

❖**Intracranial MRI and CSF:** No abnormalities.

❖**Evolution:** After 6 weeks of a exclusively hypoallergenic diet, both digestive and neurological alterations disappeared and body condition was recovered.

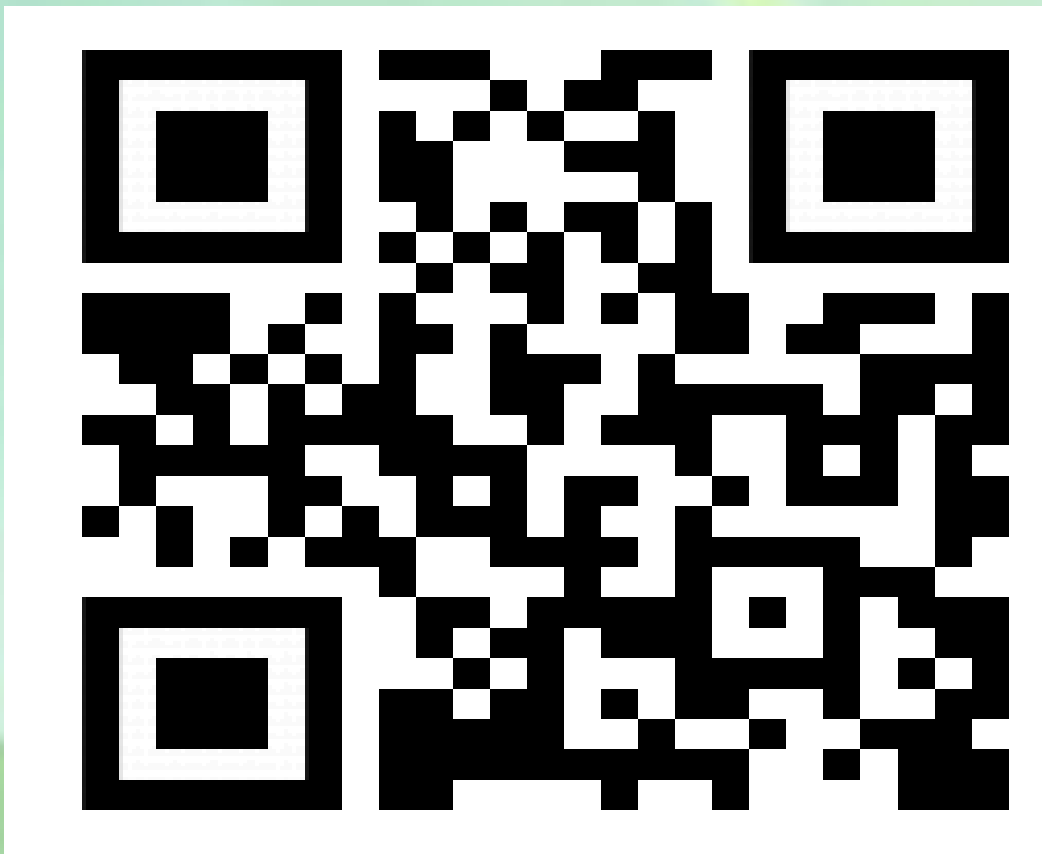


Figure 1. QR code showing movement alterations

Table 1. Analytical values outside the reference range

	Value	Reference range
Total Proteins	4,41 g/dL	5,6 – 7,5 g/dL
Alkaline phosphatase	14,47 UI/L	20 – 156 UI/L
Potassium	3,99 mmol/L	4,37 – 5,35 mmol/L

## DISCUSSION

PGSD is the first alteration of movement that has a serological relationship with gluten<sup>2, 4</sup>. It can be presented in the Border and Yorkshire Terrier <sup>4, 5</sup>. It is associated with cutaneous, neurological and digestive clinical signs <sup>2, 3, 4</sup>.

The diagnosis is made by excluding other causes of dyskinesia, recognition of the video recording and through a dietary trial based on a gluten-free diet (Fig. 2) <sup>6,7</sup>.

Recently, serological tests (ELISA) have been described that analyse antitransglutaminase-2 IgA antibody titter, but it has limited availability in veterinary medicine <sup>6,7</sup>.

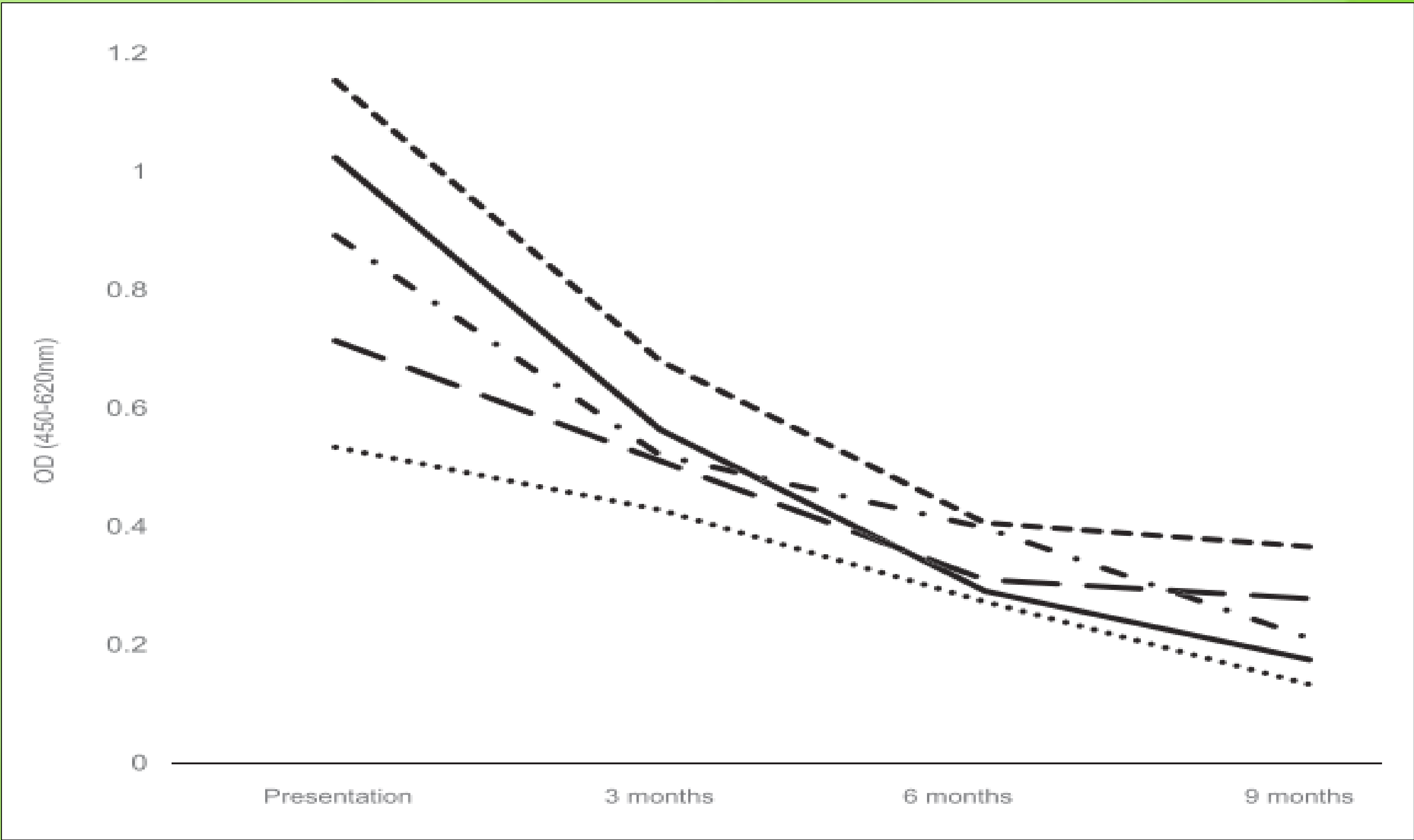


Figure 2. Graph showing the decrease of the antibody levels against antitransglutaminase-2 IgA depending on how much time the patient has been on a gluten-free diet (Lowrie *et al.* 2015)

## CONCLUSION

The pathophysiology of PGSD in veterinary medicine has not been fully described yet, since additional studies are required to determine if the clinical manifestations are related to the same disease in humans.

The treatment of choice is a gluten-free diet.

## REFERENCES

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