

COMPARISON OF 10 CASE REPORTS OF DOGS WITH EVAPORATIVE DRY EYE

INTRODUCTION

Even though it is relatively common, evaporative dry eye (EDE) often goes unnoticed in general practitioners, because the results of the Schirmer test (STT-1) are usually within normal values and the tests recommended for its diagnosis, such as the Tear Break-Up Time (TBUT) or the OSA-VET® (ocular surface analyser for veterinary medicine), are less widely used in non-specialised centres. As a result, a large number of patients suffering from this variant of the disease do not receive adequate and effective treatment, worsening their symptoms and quality of life.

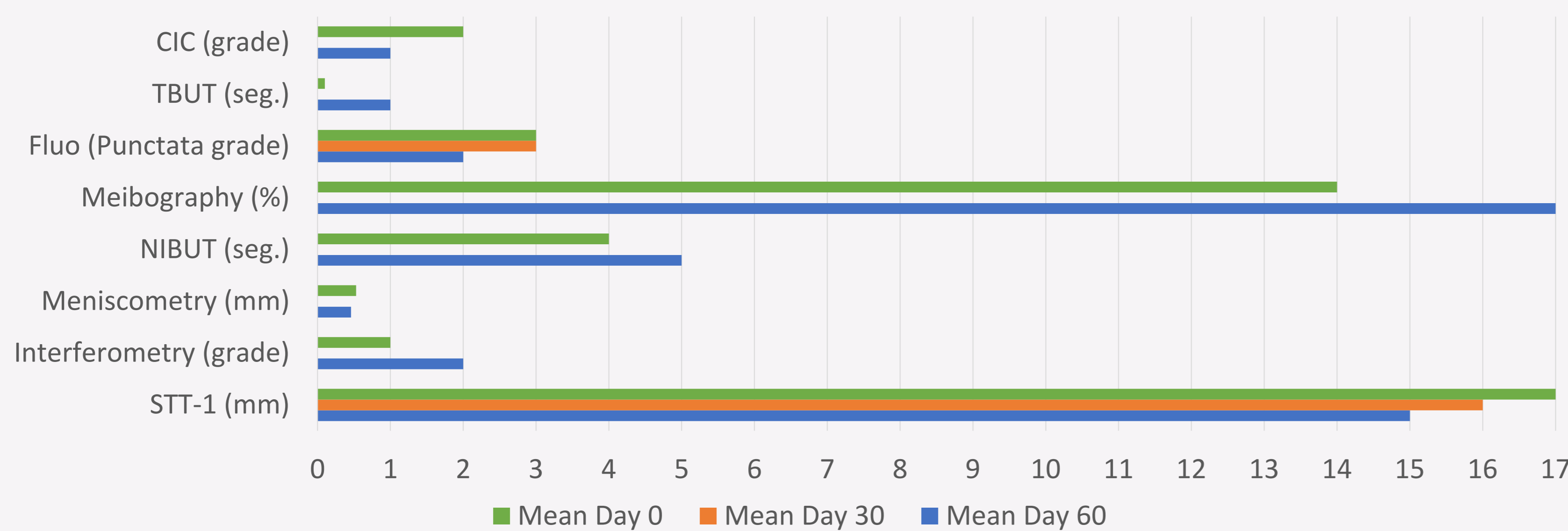
The purpose of this paper is to compile and compare the results obtained in various ophthalmological tests in 10 dogs diagnosed with EDE to assess the effectiveness of the treatments implemented, including the inclusion of an orally administered food supplement rich in omega-3 acids (Lacrimalis, Dr+Vet by Böhmen Pharma®) to improve the quality and production of tears one month and two months after the start of the therapeutic protocol.

MATERIAL AND METHODS

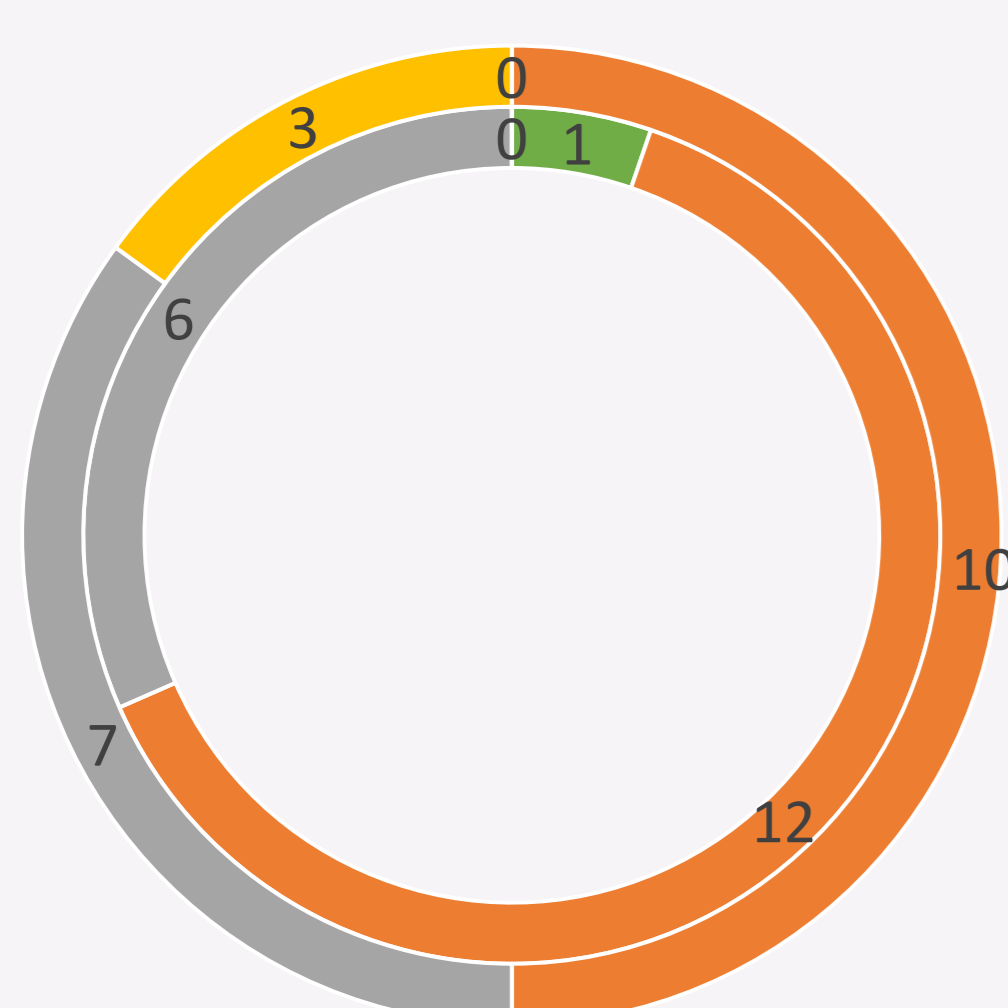
- 10 dogs during the year 2022, follow-up of 2 months each → 5 of brachiocephalic breed and 5 of different non-brachiocephalic breeds.
- The mean age of all patients was 5 years (between 1 and 15 years).
- Inclusion criteria: STT-1 > 10 mm/min and previous diagnosis of EDE in IVO.
- Exclusion criteria: use of corticosteroids and other drugs that could influence the correct performance of diagnostic tests, as well as the presence of corneal ulcer.
- Protocol during the two months of follow-up:
 - 1st visit (day 0): Schirmer's Test (STT-1), OSA-VET®, Fluorescein Test, Break-Up Time (TBUT), Lysamine Green Test, Impression Cytology (CIC).
 - 2nd Visit (day 30): Schirmer's Test (STT-1), Fluorescein Test, Break-Up Time (TBUT), Lysamine Green Test.
 - 3rd Visit (day 60): Schirmer's Test (STT-1), OSA-VET®, Fluorescein Test, Break-Up Time (TBUT), Lysamine Green Test, Impression Cytology (CIC).
- Treatment prescribed to patients:
 - Ocular lubricants and moisturisers (VisuXL®, Lubristil LIPID®, Matrix Ocular 3®, Recugel®) three times a day.
 - Nutraceutical composed of omega-3 fatty acids, lactoferrin, vitamins (C and E) and minerals (Zinc and Copper) (Lacrimalis 30 tablets of 750mg from Dr+Vet by Böhmen Pharma®) at a dose of 1 tablet/10Kg of BW every 24 hours.
 - Three patients received Tacrolimus at different concentrations (0.1%, 0.03%, 0.05%) BID or TID, at the discretion of the veterinary clinicians.

RESULTS

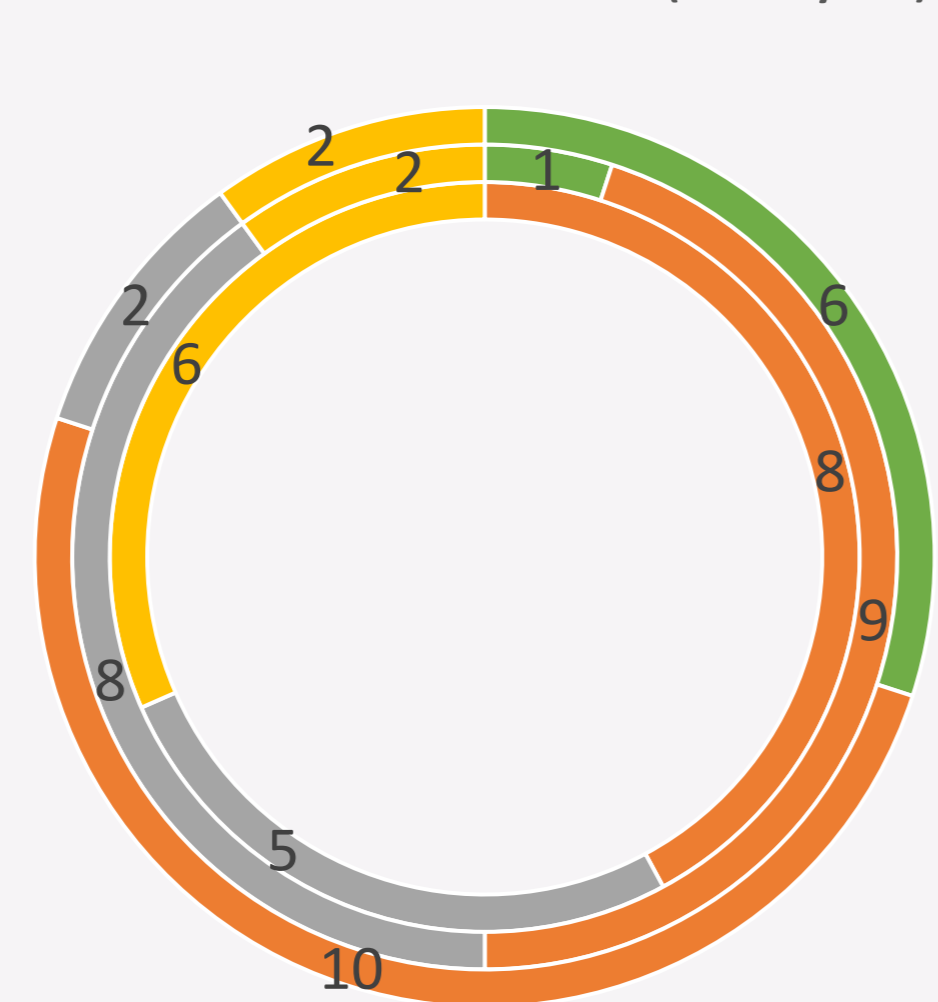
Ophthalmological test results



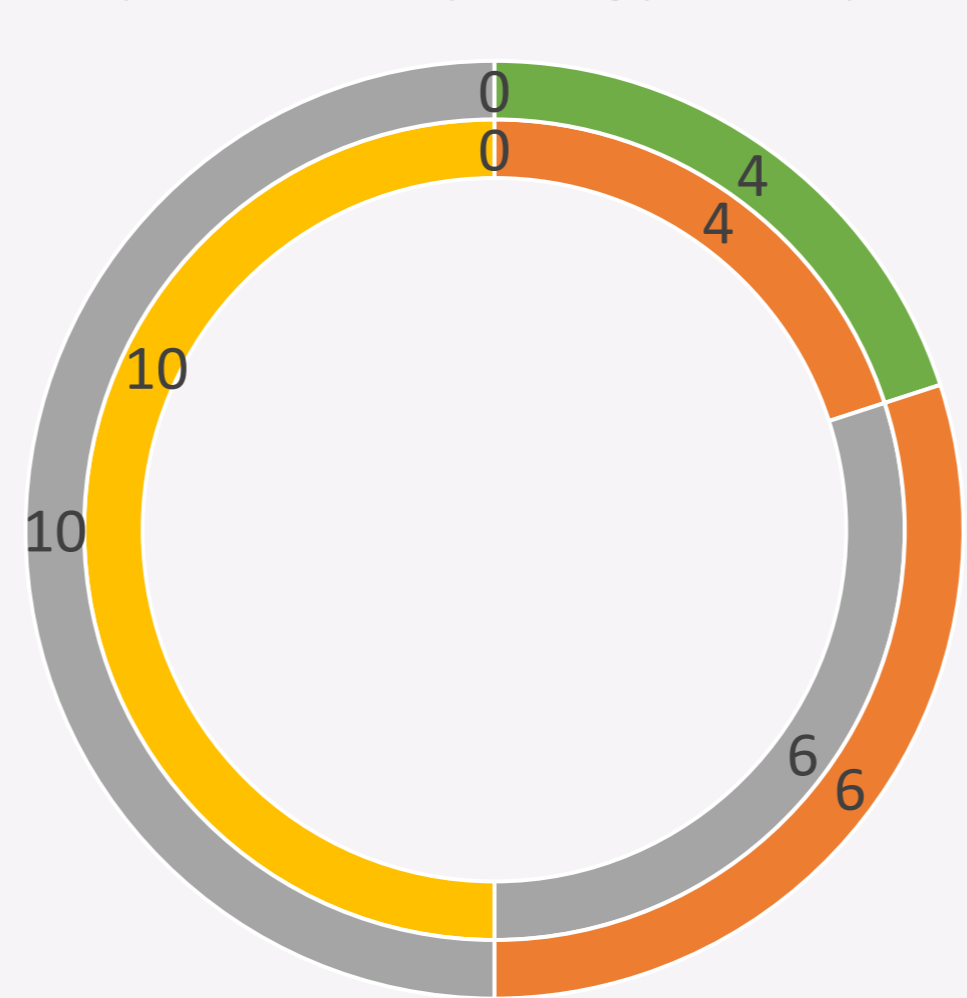
Interferometry (n° eyes)



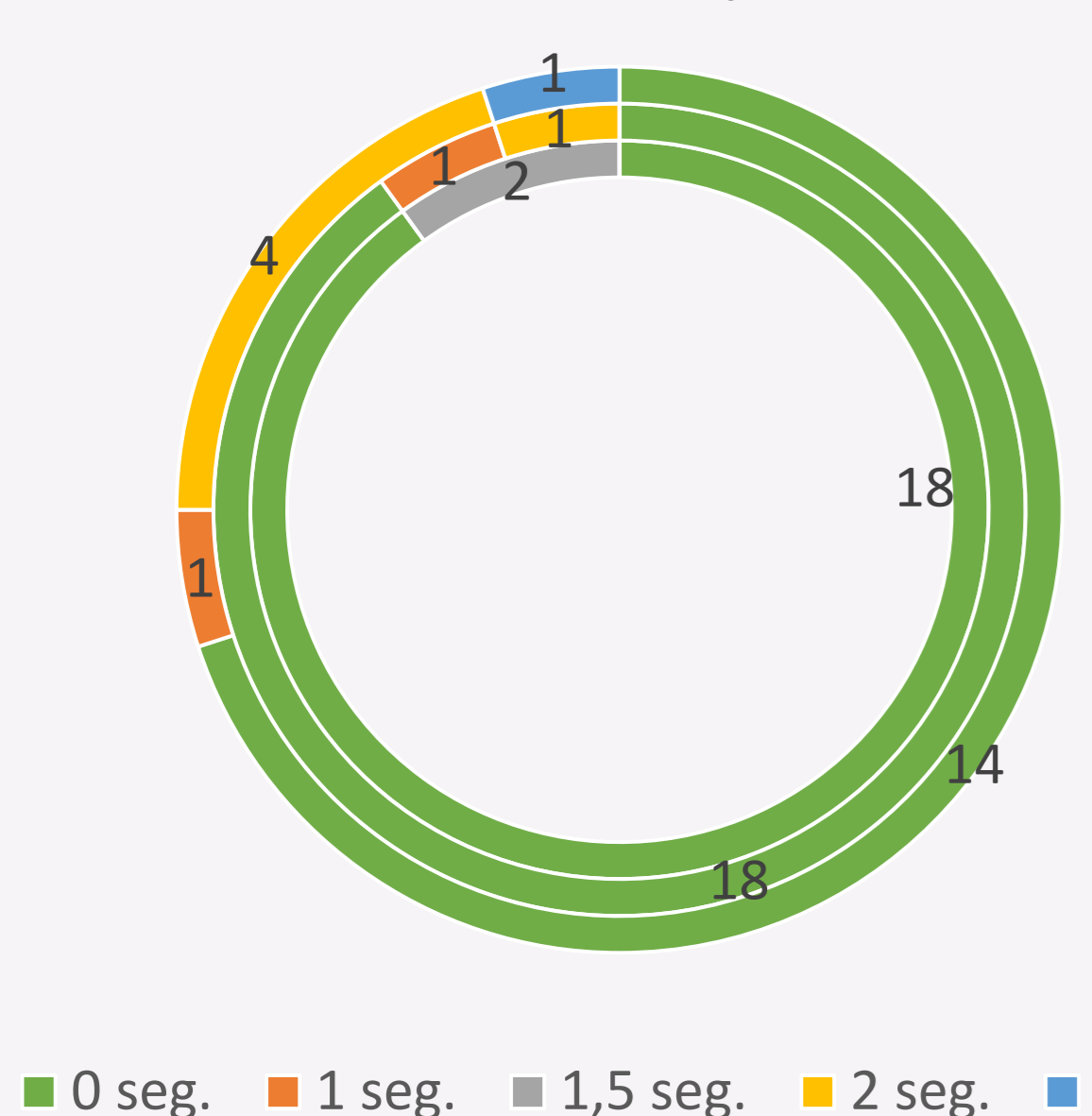
Fluorescein Stain (n° eyes)



Impression Cytology (n° eyes)



TBUT (n° eyes)



Meniscometry OU (nm)

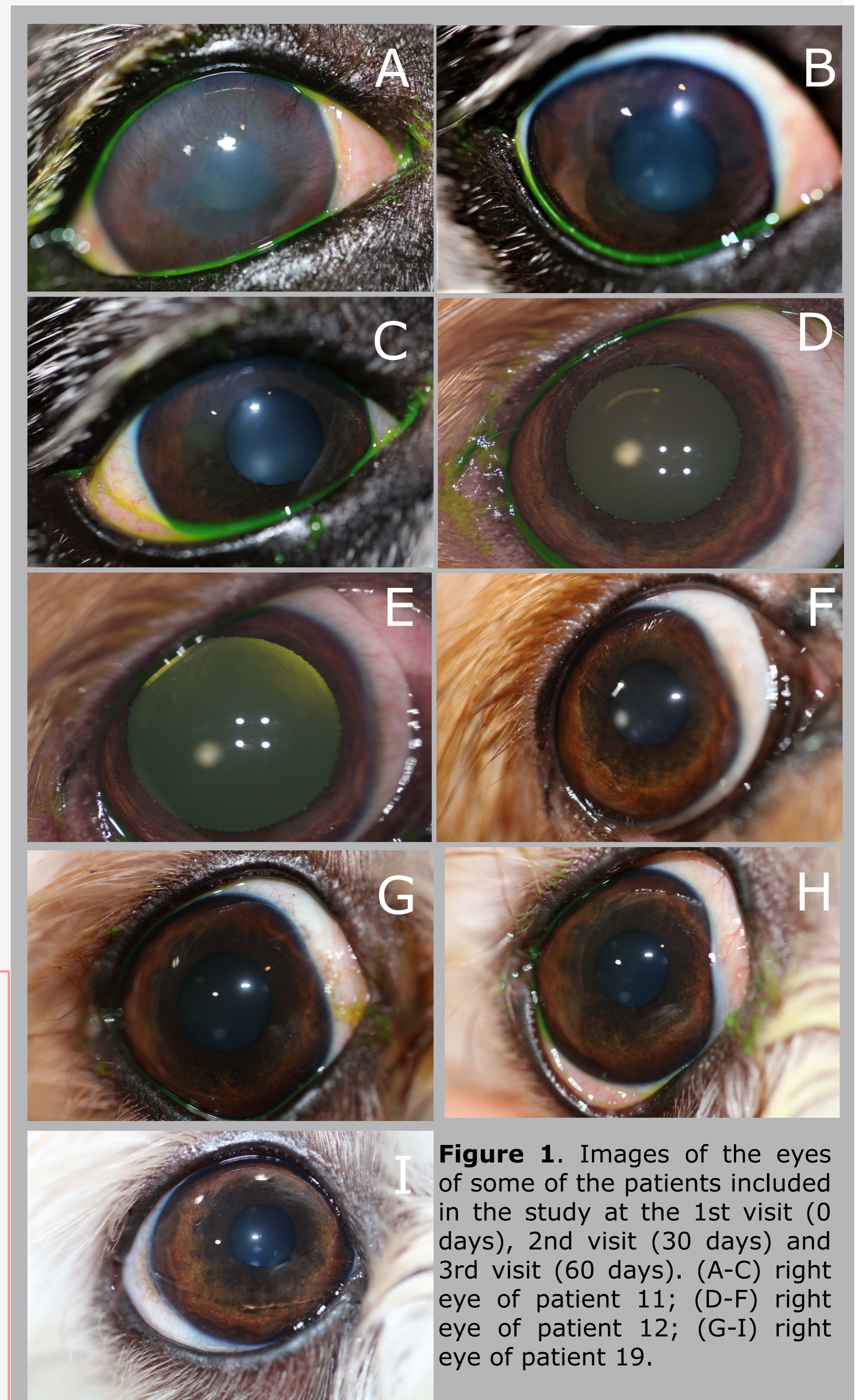
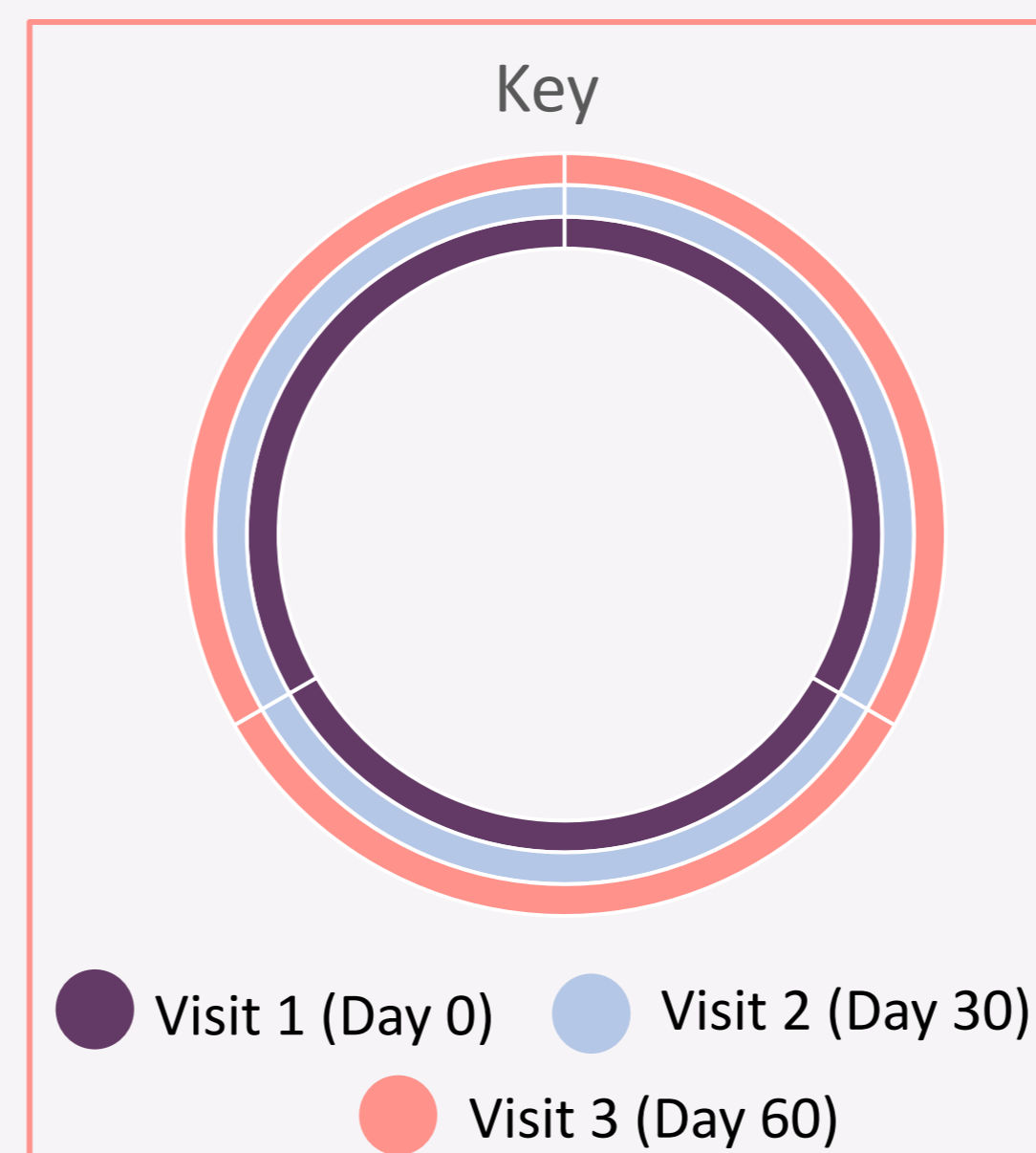
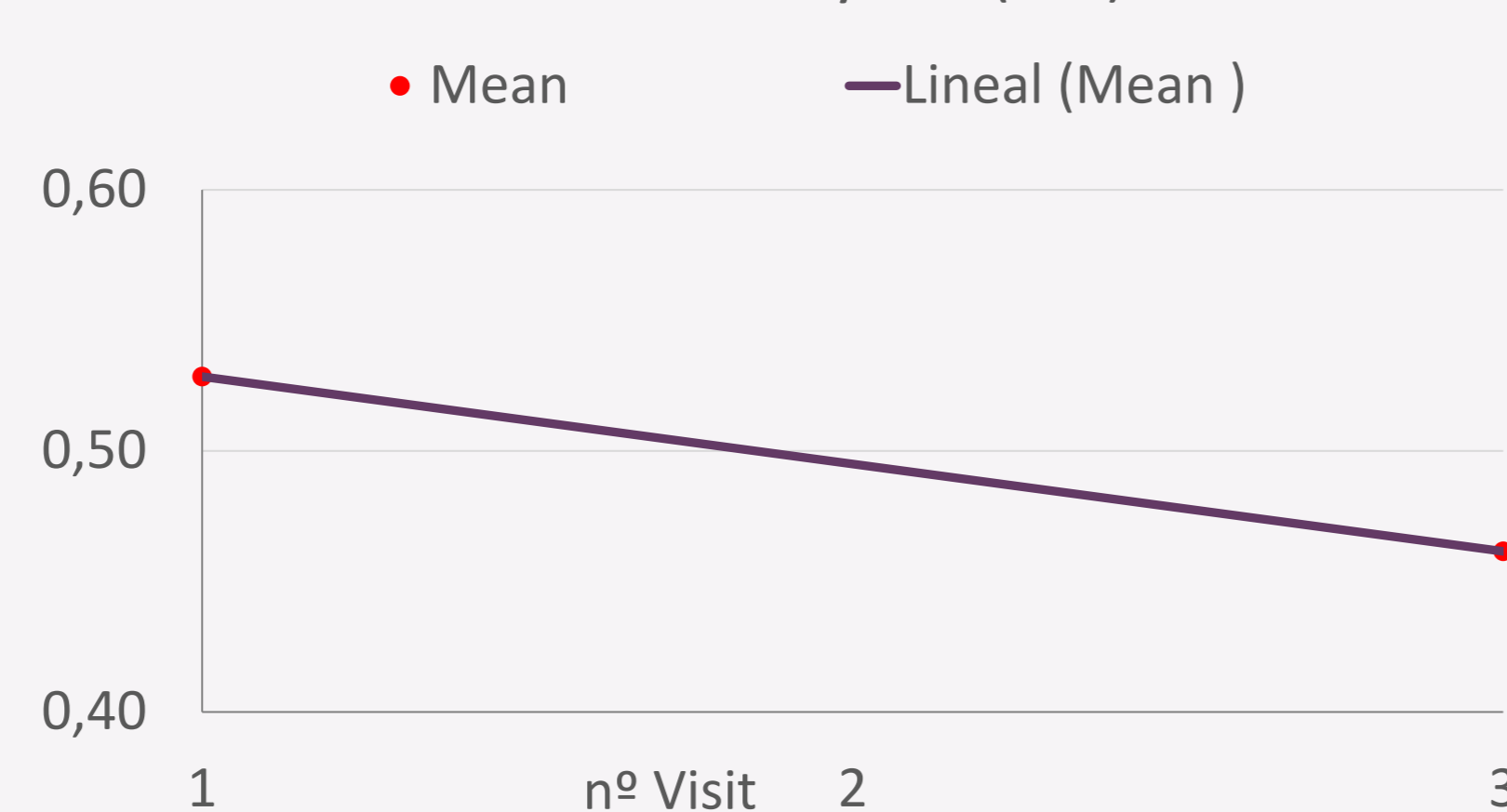


Figure 1. Images of the eyes of some of the patients included in the study at the 1st visit (0 days), 2nd visit (30 days) and 3rd visit (60 days). (A-C) right eye of patient 11; (D-F) right eye of patient 12; (G-I) right eye of patient 19.

CONCLUSION

The results obtained show an improvement in the CIC results, in the degree of Interferometry, an increase of 1 second in both NIBUT and TBUT and a slight reduction in tear production as indicated by STT-1 and Meniscometry, probably due to the reduction of the compensatory reflex of tear production due to hyperosmolarity. It can therefore be said that, in this series of cases, by applying an effective treatment based on topical ocular moisturizers and lubricants in addition to the oral administration of the Lacrimalis food supplement, there was a clinically significant improvement in symptoms and in the results of ophthalmological tests carried out after two months.

However, this document is a compilation and comparison of 10 case reports, so a controlled, randomized, double-blind clinical study with a larger number of participants would be necessary to demonstrate the efficacy of the treatment.