EARLY EFFECT OF INTRAVITREAL FARICIMAB ON HARD EXUDATES IN DIABETIC MACULAR OEDEMA

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INTRODUCTION

- Hard exudates (HE) arise from leakage of lipoproteins secondary to hyperpermeability in diabetic macular oedema (DMO)
- Intravitreal anti-VEGF treatment has been shown to reduce HE, typically after at least 6 months of treatment
- Faricimab is the first bispecific antibody to target vascular endothelial growth factor A (VEGF-A) and angiopoietin-2 (Ang-2) for the treatment of DMO
- This case series is first to evaluate the effect of faricimab on HE in a multi-ethnic population

PURPOSE

- To examine the early treatment effects of faricimab on HE in DMO
- To correlate the effects with best corrected visual acuity (BCVA), central retinal thickness (CRT) and macular volume (MV)

METHODS

- Retrospective review of patients initiated on faricimab for centre-involving DMO with HE in a retina clinic in London, UK between August 2022- July 2023
- Patients were included if they had colour fundus photographs:
  - 'Baseline': Up to 3 months prior to initiation of faricimab
  - 'Within 6 months': Up to 6 months after initiation of faricimab
  - 'Within 1 year': Up to 6 months after initiation of faricimab
- Demographic data and BCVA was obtained using Medisight records
- CRT and MV were obtained from OCT scan
- ImageJ was used for semi-automated segmentation and measurement of the HE area within the ETDRS grid

References:

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RESULTS

Baseline demographics

	N	%
No. of patients	16	
No. of eyes	19	
Age (mean)	**60.3**	
40-49	1	5
50-59	9	47
60-69	8	42
70-79	1	5
Sex		
Male	7	37
Race		
White	2	11
South Asian	9	47
Black African	2	11
Black Caribbean	2	11
Other	4	21

Injection data

	Within 6 months, *N (%)*	Within 1 year, *N (%)*
No. of eyes	16	8
No. of treatment-naïve eyes	10 (53)	5 (63)
Mean follow-up	4.5	11.45
Mean no. of injections	3.7	8.4

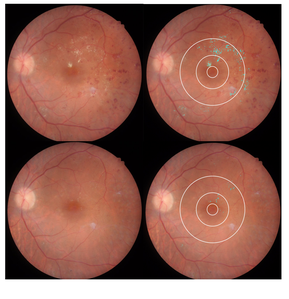


Figure 1- Colour fundus photographs of the left eye of a 57-year-old South Asian male at baseline (top row) and 4.3 months after initiation of faricimab (bottom row) with semi-automated segmentation of HE within the ETDRS ring (right)

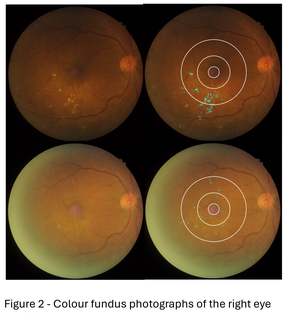
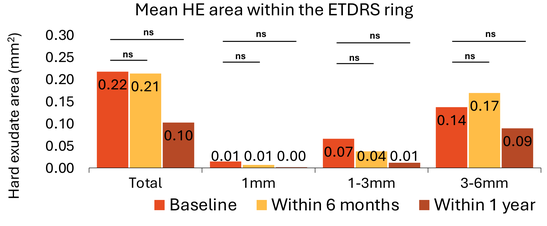
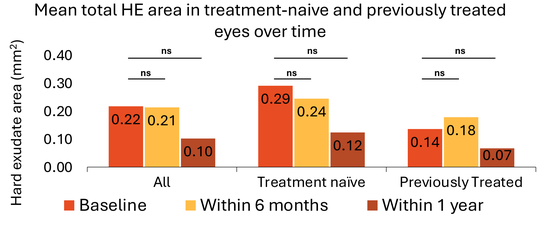


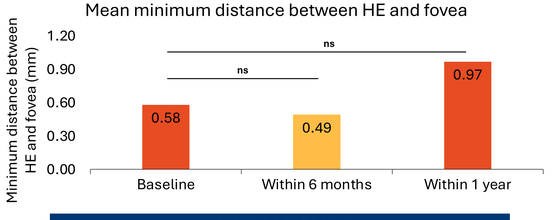
Figure 2 - Colour fundus photographs of the right eye of a 59-year-old White female at baseline (top row) and 5.3 months after initiation of faricimab injections (bottom row) with semi-automated segmentation of HE within the ETDRS ring (right)

Mean HE area reduced following initiation of faricimab

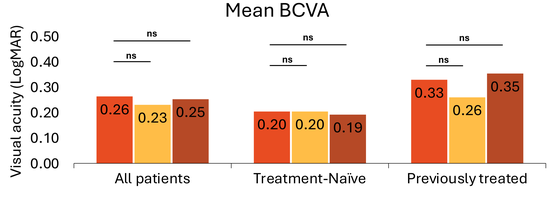


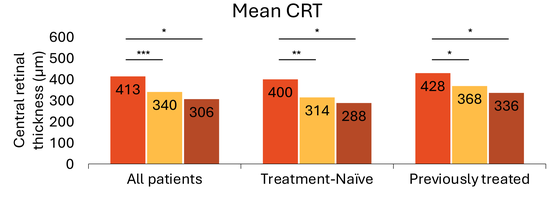


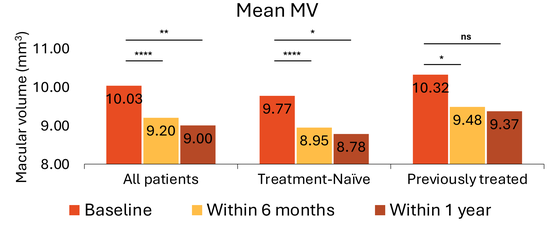
Distance between fovea and closest HE increased after initiation of faricimab



Improvement in BCVA, CRT and MV was higher in treatment-naïve eyes







CONCLUSION

- There is a trend towards reduction of HE area and increased distance from the fovea within 12 months of initiation with faricimab, possibly implicating an additional benefit of dual-inhibition of VEGF and Ang-2
- Larger studies are required to confirm this phenomenon

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LIMITATIONS

- Limited sample size therefore a lack of statistical power
- Real-world study with standard-of-care retinal images
- Differing cameras with different resolutions may influence accurate comparison on exudate measurements
- Images were not always performed on day of injection – mean of 1.5 months prior to injection date