https://doi.org/10.5114/oku/221517 (Case Report)

Received: 2.04.2026 Accepted: 23.04.2026

Switching to faricimab in cases of limited response to aflibercept in patients with neovascular age-related macular degeneration – report of two clinical cases

Mateusz Raniewicz, Monika Grudzień, Anna Święch, Jerzy Mackiewicz

Department of Vitreoretinal Surgery, Medical University of Lublin

Summary: Age-related macular degeneration is the leading cause of vision loss among elderly patients. Treatment for the exudative (neovascular) form of age-related macular degeneration involves intravitreal injections of anti-vascular endothelial growth factor (anti-VEGF) agents. However, this therapy is long term and burdensome, and therefore new substances and treatment regimens are being sought. According to scientific reports and real-world clinical observations, switching to a different drug during treatment is beneficial for many patients. This paper presents two clinical cases in which switching medications during anti-vascular endothelial growth factor therapy proved beneficial both functionally and morphologically.

Key words: neovascular form age-related macular degeneration (nAMD), anti-vascular endothelial growth factor (anti-VEGF) agents, faricimab, aflibercept.

Introduction

Age-related macular degeneration (AMD) is one of the leading causes of central vision loss and blindness among older people in developed countries. The main risk factors for the development of AMD are ageing, smoking, cardiovascular disease, and genetic predisposition [1]. Advanced forms of AMD leading to vision loss are divided into non-neovascular ('dry') and neovascular ('wet') forms [2]. Neovascular age-related macular degeneration (nAMD) is characterised by the angiogenesis of abnormal blood vessels, leading to intraretinal oedema and subsequent loss of retinal function [2, 3]. It is estimated that this disease affects over 200 million people worldwide, and as the population ages, its prevalence is set to rise further [4].

One of the mediators responsible for angiogenesis and increased vascular permeability is vascular endothelial growth factor (VEGF) [5]. VEGF binds to extracellular tyrosine kinase receptors (VEGFRs), which are primarily found on the endothelial cells of blood vessels. Within the VEGFR family, the processes underlying the development of nAMD mainly involve VEGFR-1, which promotes the migration of inflammatory cells, and VEGFR-2, which mediates the migration of endothelial cells and increases vascular wall permeability [6].

Currently, intravitreal injections of anti-VEGF agents are the gold standard for the treatment of nAMD. The main aim of anti-VEGF therapy is to maintain current visual acuity and, if possible, to improve it. Due to the recurrent nature of nAMD, long-term therapy with cyclical injections of these agents is essential. Consequently, this treatment is burdensome for patients and places a significant strain on the healthcare system [7]. To mitigate these negative aspects, a 'treat-and-extend' strategy is employed. This involves an initial series of loading injections over a short period, followed by an extension of the intervals between subsequent doses to maximise the time between treatments whilst maintaining optimal therapeutic effect [8]. In some cases, despite active treatment, the disease progresses, which may be associated with an inadequate response to the drugs used or their efficacy diminishing over time.

Given the burden of therapy and the challenges encountered in patients with treatment-resistant nAMD, new therapeutic approaches are being actively explored. Several prospective and retrospective studies in patients with an insufficient response to initial anti-VEGF therapy have evaluated switching to an alternative anti-VEGF agent. These studies have demonstrated favourable therapeutic outcomes, including improvement in visual acuity as well as a reduction in macular oedema [9].

Faricimab is a bispecific antibody with a dual mechanism of action, targeting both VEGF and angiopoietin-2 (Ang-2), which may enhance therapeutic efficacy in nAMD. Clinical studies have demonstrated the effectiveness of faricimab in patients previously treated with other anti-VEGF agents [10]. The TENAYA and LUCERNE trials further showed that faricimab administered at 16-week intervals provides non-inferior efficacy compared with aflibercept administered every 8 weeks [9].

This article describes the treatment outcomes of two patients treated with anti-VEGF agents, who were switched from aflibercept to faricimab.

Clinical case 1

An 85-year-old woman with a history of long-standing, gradual vision loss in her right eye and no history of diabetes presented to the retinal clinic. A full ophthalmological examination was performed; at the time of the initial visit, uncorrected visual acuity in the right eye (UCVA OD) was 0.5, and optical coherence tomography (OCT) (Fig. 1) revealed a central retinal thickness (CRT) of 321 μm. The patient was enrolled in a treatment programme using 2 mg aflibercept.

Three loading doses of aflibercept were then administered at monthly intervals, in accordance with the treatment protocol. A full ophthalmological examination and OCT scan were performed at each visit. At the follow-up examination one month after the third dose of aflibercept, the CRT was 280 μm (Fig. 2), whilst the UCVA had deteriorated to 0.3.

Following the loading doses, the intervals between injections were extended to 8 weeks; however, optimal treatment outcomes were not achieved; subretinal fluid (SRF) was not completely absorbed, and UCVA continued to deteriorate. The patient received a total of 11 doses of aflibercept, and the treatment period lasted

16 months. In a follow-up examination performed 2 months after the 11th dose of aflibercept, CRT was 232 µm (Fig. 3) and UCVA was 0.25. A decision was made to switch anti-VEGF to the new drug – faricimab.

Treatment was initiated with three loading doses administered at monthly intervals. The change in preparation had a beneficial effect on the treatment results; one month after the first dose, CRT was 191 µm (Fig. 4A), SFR was absorbed, and UCVA increased to 0.32; after the second and third injections, CRT values were 147 µm (Fig. 4B) and 168 µm (Fig. 4C), respectively, and UCVA was 0.4 and 0.3.

Following the loading doses, the intervals between injections were extended to 2 months; despite this longer interval, no increase in disease activity was observed and the UCVA did not deteriorate, so a decision was made to extend the interval between doses to 3 months, which was also well tolerated by the patient. A total of 13 doses of faricimab have been administered to date. During a follow-up examination conducted one month after the 12th injection, the CRT was 169 µm (Fig. 5) and the UCVA reached a level of 0.7.

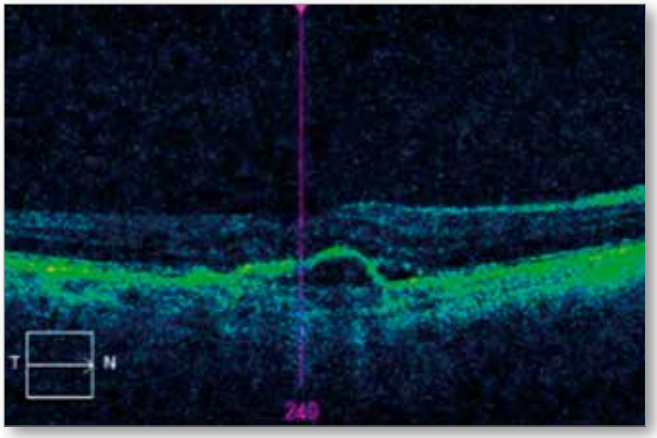

Fig. 1. OCT image of the right eye before first injection of aflibercept.

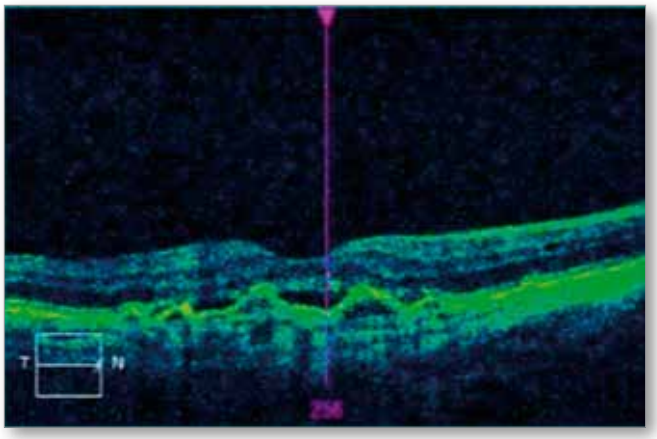

Fig. 2. OCT image of the right eye after 3 doses of aflibercept.

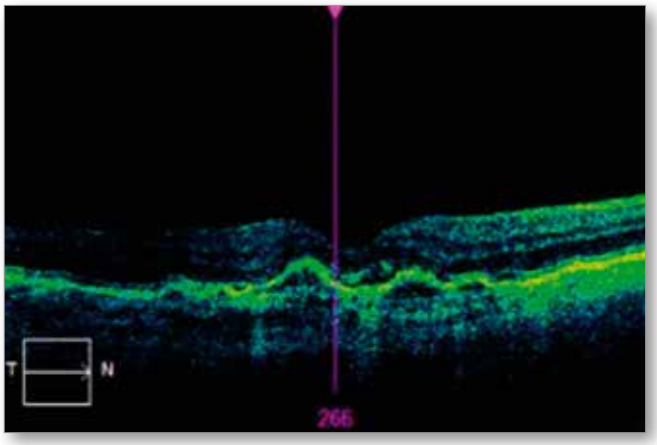

Fig. 3. OCT image of the right eye before switching to faricimab.

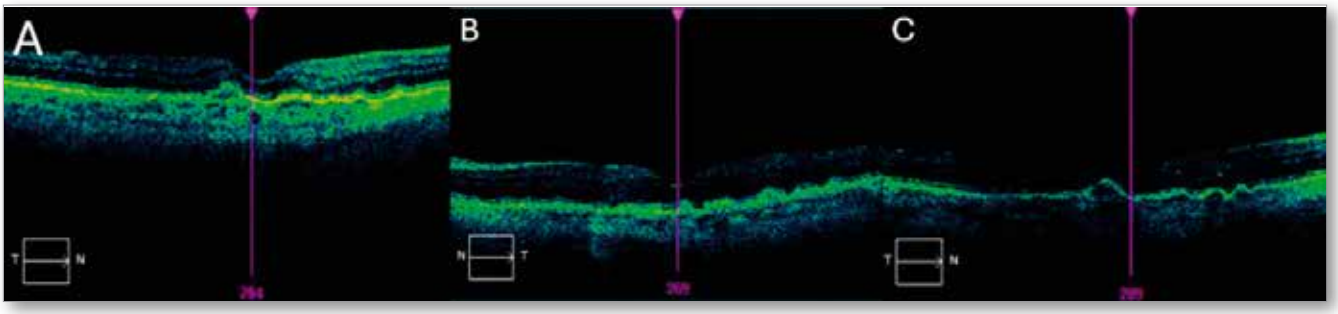

Fig. 4. OCT image of the right eye after 3 doses of faricimab.

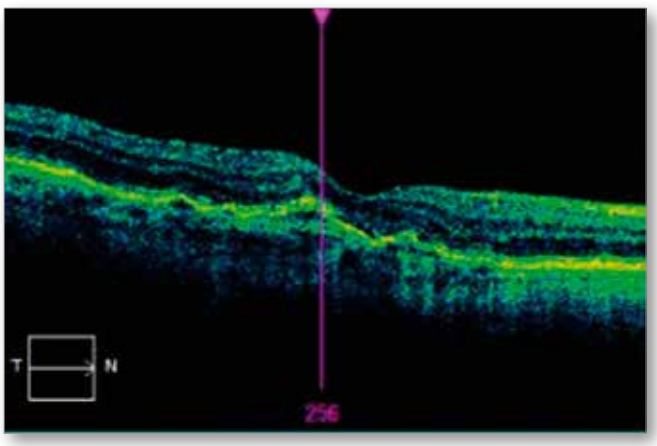

Fig. 5. OCT image of the right eye after 12 doses of faricimab.

Clinical case 2

Another case involved a 74-year-old female patient with no history of diabetes, who presented to the retinal clinic due to progressive vision loss in her right eye. During the initial comprehensive ophthalmological examination, UCVA in the right eye (OD) was 0.25. OCT (Fig. 6) revealed a CRT of 605 µm, and the patient was therefore enrolled in a treatment programme with aflibercept at a dose of 2 mg.

Three loading doses of aflibercept were administered at monthly intervals, in accordance with the standard treatment protocol. A comprehensive ophthalmological assessment, including OCT, was performed at each follow-up visit. One month after the third dose, a CRT value of 290 µm was recorded at the follow-up examination (Fig. 7), with a visual acuity of 0.5 in the right eye.

Following loading doses, despite an improvement in visual acuity, a sharp increase in CRT values was observed: 2 months

after the loading doses, the CRT was 471 µm, and 5 months after the loading doses, it was 622 µm. An increase in the amount of subretinal fluid was also noted in follow-up OCT scans. The patient received a total of 8 doses of aflibercept, and the treatment period lasted 9 months. In a follow-up examination performed 3 months after the 8th dose of aflibercept, the CRT was 551 µm (Fig. 8) and the UCVA was 0.6. A decision was made to switch anti-VEGF to the new drug – faricimab.

Treatment began with the administration of three doses of the drug at monthly intervals. The change in preparation had a beneficial effect on the treatment outcomes: one month after the first injection, the CRT was 251 µm (Fig. 9A), SRF was resolved, and visual acuity increased to 0.7. After the second and third injections, the CRT values were 250 µm (Fig. 9B) and 318 µm (Fig. 9C), respectively. It is worth noting the improvement in visual acuity to 0.8 and 0.8, respectively.

Following the loading doses, the intervals between injections were extended to 2 months. A total of 8 doses of faricimab have been administered to date. During the study, on the day of the 8th injection, the CRT was 305 µm (Fig. 10) and the UCVA remained at 0.8.

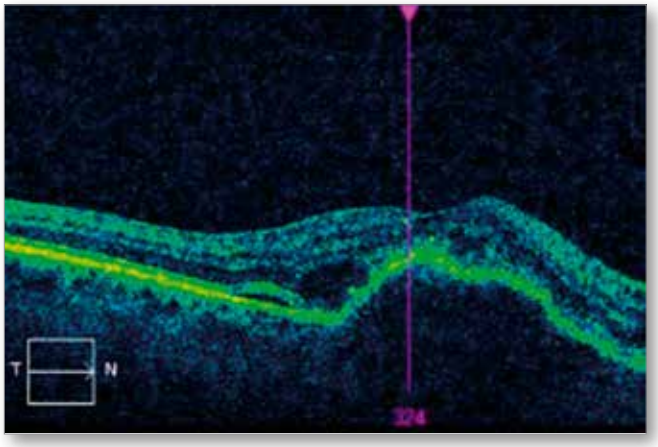

Fig. 6. OCT image of the right eye before first injection of aflibercept.

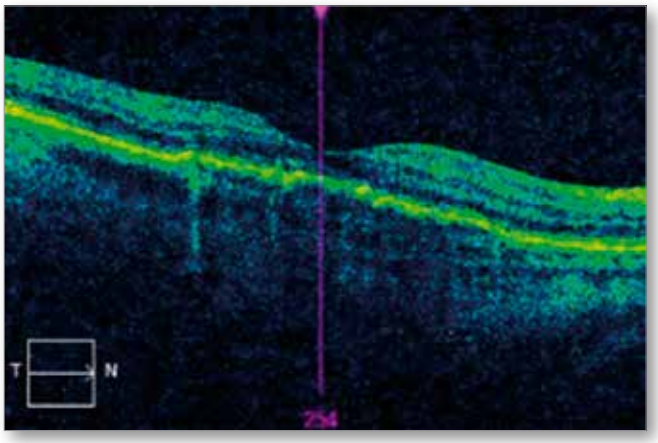

Fig. 7. OCT image of the right eye after 3 doses of aflibercept.

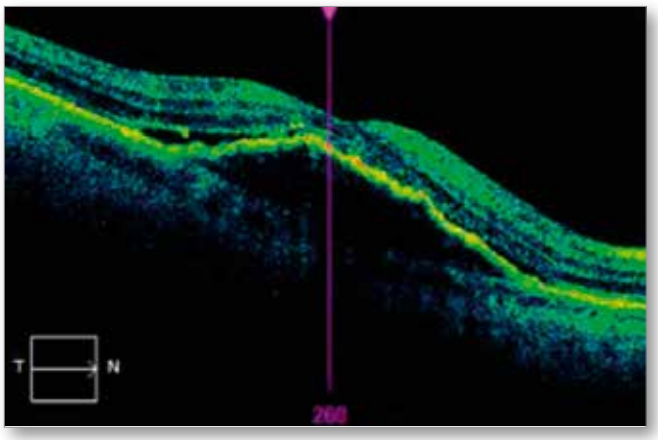

Fig. 8. OCT image of the right eye before switching to faricimab.

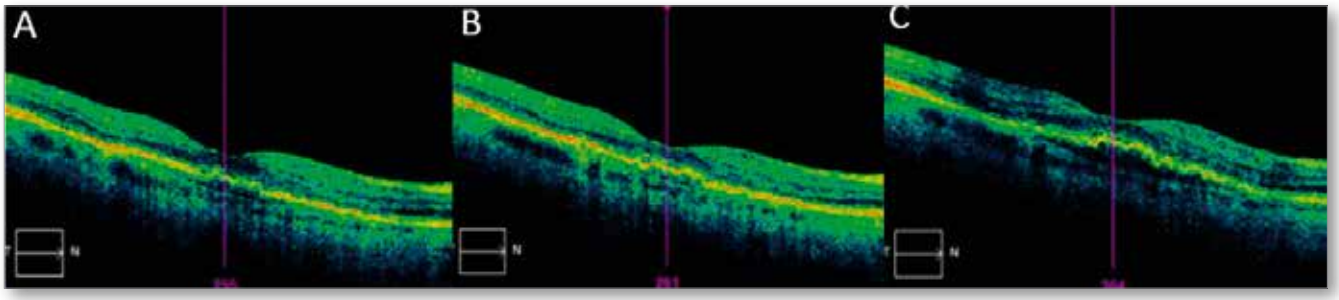

Fig. 9. OCT images of the right eye after 3 doses of faricimab.

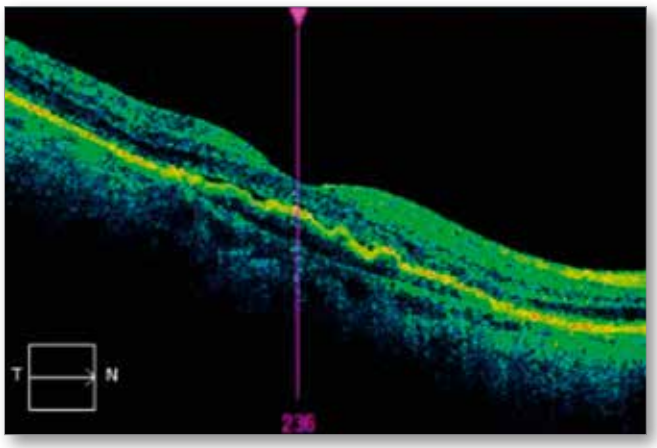

Fig. 10. OCT image of the right eye after 7 doses of faricimab.

Conclusions

nAMD remains a common clinical challenge, with treatment that is burdensome for both patients and healthcare systems. Therefore, there is a need to develop new therapeutic strategies that not only improve treatment efficacy but also simplify and optimise the treatment regimen.

The two cases described above demonstrate that switching anti-VEGF medication in patients with nAMD may contribute to improved therapeutic outcomes among those with refractory disease. Thanks to new formulations, it is also possible to extend the intervals between doses, which simplifies the treatment process and reduces the risk associated with more frequent vitreous infections.

Disclosure
Conflict of interests: none declared
Funding: no external funding
Ethics approval: Not applicable.

References:

1. Fleckenstein M, Keenan TDL, Guymer RH, et al.: *Age-related macular degeneration.* Nat Rev Dis Primers. 2021; 7(1): 31. Published 2021 May 6. doi:10.1038/s41572-021-00265-2.
2. Solomon SD, Lindsley K, Vedula SS, et al.: *Anti-vascular endothelial growth factor for neovascular age-related macular degeneration.* Cochrane Database of Systematic Reviews. 2019; Issue 3. Art. No.: CD005139. DOI: 10.1002/14651858.CD005139.pub4. Accessed 21 April 2026.
3. Amoaku W, Chakravarthy U, Gale R, et al.: *Defining response to anti-VEGF therapies in neovascular AMD.* Eye. 2015; 29: 721–731. https://doi.org/10.1038/eye.2015.48.
4. World Health Organization. *World report on vision; 2019*. Available from: https://www.who.int/publications/i/item/9789241516570. Accessed February 20, 2022.
5. Deng Y, Qiao L, Du M, et al.: *Age-related macular degeneration: Epidemiology, genetics, pathophysiology, diagnosis, and targeted therapy.* Genes Dis. 2021; 9(1): 62–79. Published 2021 Feb 27. doi:10.1016/j.gendis.2021.02.009.
6. Melincovici CS, Boşca AB, Şuşman S, et al.: *Vascular endothelial growth factor (VEGF) – key factor in normal and pathological angiogenesis*. Rom J Morphol Embryol. 2018; 59(2): 455–467.
7. Rosenberg D, Deonarain DM, Gould J, et al.: *Efficacy, safety, and treatment burden of treat-and-extend versus alternative anti-VEGF regimens for nAMD: a systematic review and meta-analysis*. Eye (Lond). 2023; 37(1): 6–16. doi:10.1038/s41433-022-02020-7.
8. Mitchell P, Holz FG, Hykin P, et al.: *Efficacy and safety of intravitreal aflibercept using a treat-and-extend regimen for neovascular age-related macular degeneration: The ARIES Study: A Randomized Clinical Trial.* Retina. 2021; 41(9): 1911–1920. doi:10.1097/IAE.0000000000003128.
9. Heier JS, Khanani AM, Quezada Ruiz C, et al.: *Efficacy, durability, and safety of intravitreal faricimab up to every 16 weeks for neovascular age-related macular degeneration* (TENAYA and LUCERNE): *two randomised, double-masked, phase 3, non-inferiority trials*. Lancet. 2022; 399(10326): 729–740. doi:10.1016/S0140-6736(22)00010-1.
10. Wong DT, Aboobaker S, Maberley D, et al.: *Switching to faricimab from the current anti-VEGF therapy: evidence-based expert recommendations*. BMJ Open Ophthalmol. 2025; 10(1): e001967. Published 2025 Jan 16. doi:10.1136/bmjophth-2024-001967.

Reprint requests to:
Mateusz Raniewicz, MD (e-mail: mateusz.raniewicz.mr@gmail.com)
Department of Vitreoretinal Surgery, Medical University of Lublin
Chmielna 1, 20-079 Lublin, Poland