Short-term results of switchback from aflibercept to ranibizumab in neovascular age-related macular degeneration in clinical practice

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Purpose

To analyze efficacy of switchback from Aflibercept to Ranibizumab in patients with neovascular AMD (nAMD) previously switched from Ranibizumab (R-IVT) to Aflibercept (A-IVT) with PRN protocol in real life condition.

Methods

It is a retrospective double-center study of forty-five (47 eyes) included patients with nAMD. All patients were previously treated with ranibizumab, then aflibercept and then again ranibizumab.

Primary outcome was : changes in best-corrected visual acuity (BCVA) before (T0), after (T1) switch, and three months after switchback (T2).

Secondary outcomes : changes in central foveal thickness (CFT) on SD-OCT between T0, T1, and T2.

Characteristics	
Eyes (n)	47
Mean age (range)	77.6 (55-91)
Women, n (%)	22 (46,8%)
Right eye, n (%)	25 (53,1%)
Type of AMD	
Occult CNV, n (%)	29 (61,7%)
Classic CNV, n (%)	6 (12,7%)
Mixed CNV, n (%)	4(8,5%)
PCV, n (%)	5(10,6%)
RAP, n (%)	3(6,4%)
Number of injections	
Ranibizumab injections at T0	16.4 (3-44)
Aflibercept injections at T1	2.3±1.1
Patients with ≥ 3 A-IVT, n (%)	23 (48,9%)
Ranibizumab injections at T2	2.6±1.5

Table 1. Patient demographics and baseline characteristics

CNV Choroidal neovascularisation, PCV Polypoidal choroidal vasculopathy, RAP Retinal angiomatous proliferations, SD Standard deviation

Conflict of interest : NONE

	T0	T1		T2		
	Mean±SD	Mean±SD	Pvalue T0-T1	Mean±SD	Pvalue T1-T2	Pvalue T0-T2
MAVC (lettres)	**67.4** ± 13.4	**66.7** ±14.4	0.4248	**68.2** ±13.9	0.0230	0.5153
CFT (µm)	**317.8** ±89.6	**306.9** ±68.1	0.1608	**291.2** ±76.6	0.0683	0.0027

Table 2. Mean BCVA, CFT and P value

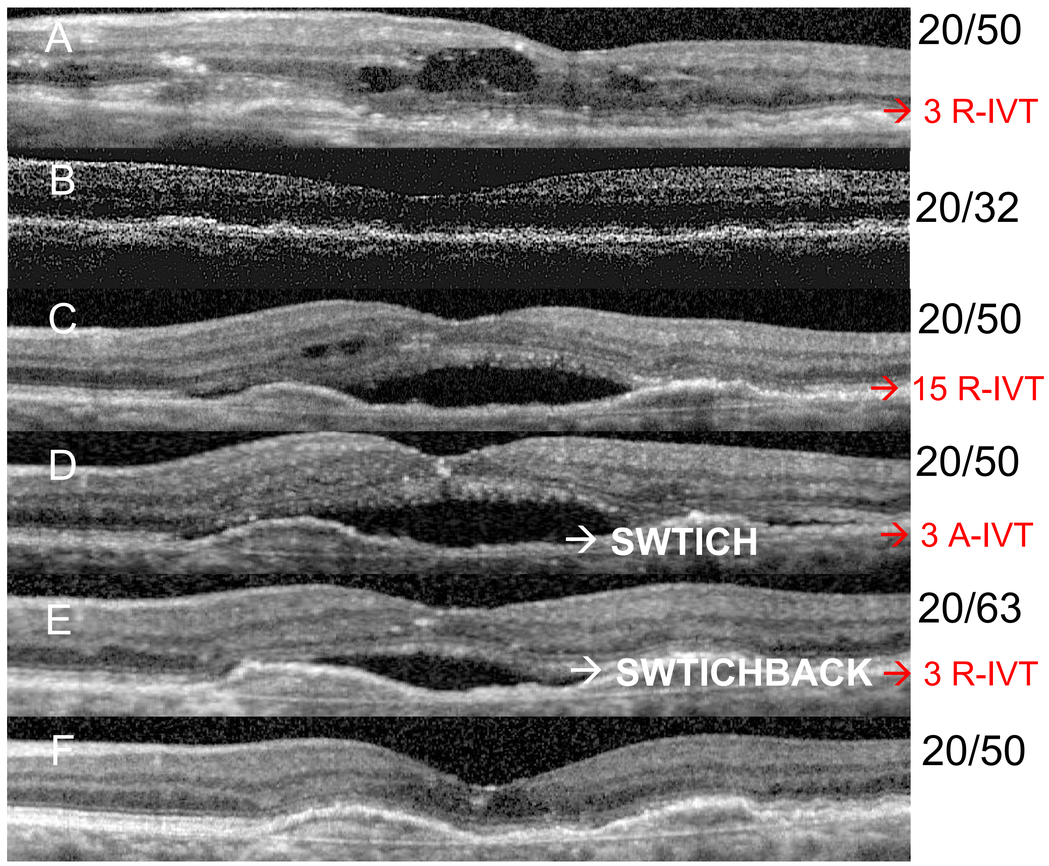
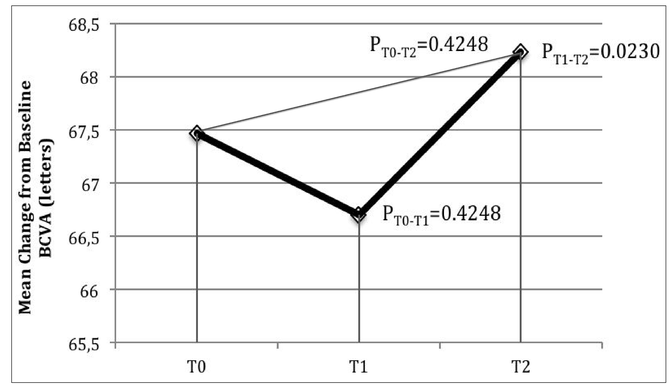
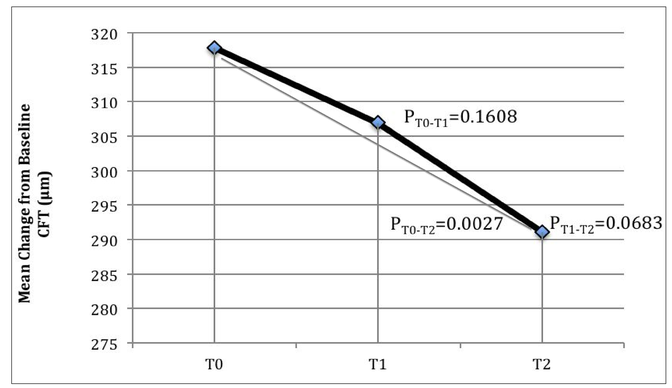


Figure. Evolution of patient's OCT-SD with nADM. The patient had 18 R-IVT from Oct 2010 to Jan 2014 (A-D), then have been switched to 3 A-IVT between Jan and April 2014 (E) and finally switchbacked due to persistent exudative signs and loss of vision. No recidive two months after the third R-IVT(F).





Results

BCVA significantly improved between T1 and T2 (p=0.0230).

The mean CFT decreased from 317.8µm±89.6 at T0 to 291.2µm±76.6 at T2. The decrease of CFT was statistically significant between T0 and T2 (p=0.0027).

Discussion

The anatomical and functional improvement observed after switchback suggests tachyphylaxis as the causative mechanism of initial loss of efficacy of the ranibizumab.[1,2]

Conclusion

In our series, a short-term benefit of switchback from an anti-VEGF agent to another was observed in patients with nAMD who did not benefit from the switch.

Biblio
1 Forooghian F et al. Tachyphylaxis after intravitreal bevacizumab for exudative age-related macular degeneration. Retina 2009.
2 Eghøj MS, et al. Tachyphylaxis during treatment of exudative age-related macular degeneration with ranibizumab. Br J Ophthalmol 2012.