Adalimumab is equally efficient as infliximab in achieving sustained remission in Ulcerative Colitis but inferior in patients with severe disease

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Background

Anti-TNF treatment with infliximab (IFX) and adalimumab (ADA) are established first-line biological therapies in patients with ulcerative colitis (UC). No head-to-head studies between the two drugs exist but meta-analysis of RCTs indicate that IFX might be more effective than ADA for the induction of clinical remission[1,2]. However, observational studies conclude that ADA seems to have similar effect as IFX [3,4]. Our aim was to evaluate any difference in effect between IFX and ADA in bio-naive patients with UC in the short and long term in a real world setting during the modern era of therapeutic drug monitoring and dose optimization.

Methods

We performed a retrospective multicentre observational cohort study. Bio-naive patients with active UC, initiating treatment with IFX or ADA at four major out-patient IBD-units 2018-2022, were included. Data was received by a structured review of medical records.

Results

271 patients were included, 105 in the IFX group and 166 in the ADA group. The primary endpoint steroid-free clinical remission (SFCR) at 12 months was reached in 43% (n=37) of patients with IFX and 35% (n=55) with ADA (aOR: 1.41 (0.81-2.45), p=ns).

	Infliximab	Adalimumab	aOR (CI)	p-value
Steroid-free clinical remission 12 months, n (%)	37 (43)	55 (35)	1.41 (0.81-2.45)	0.22
Clinical response 3 months, n (%)	77 (74)	106 (67)	1.50 (0.85-2.65)	0.16
Clinical remission 3 months, n (%)	71 (68)	91 (57)	1.83 (1.07-3.14)	<0.05
Biochemical remission 3 months, n (%)	42 (51)	61 (45)	1.38 (0.78-2.44)	0.27
Clinical remission 12 months, n (%)	43 (49)	74 (47)	1.20 (0.70-2.07)	0.50
Biochemical remission 12 months, n (%)	27 (36)	59 (40)	1.03 (0.57-1.89)	0.92

Table 1. Outcome at 3 and 12 months. Multivariate logistic regression analysis, confounding factors: sex, age, disease severity, disease extension.

Regarding secondary endpoints, clinical remission at 3 months was more common with IFX than ADA (68% vs 57%, aOR 1.83 (1.07-3.14), p<0.05) but no difference was observed regarding clinical response at 3 months (74% vs 67%, p=ns), clinical remission at 12 months (49% vs 47%, p=ns) and biochemical remission at 3 months (51% vs 45%, p=ns) and at 12 months (36% vs 40%, p=ns)(Table 1).

In the subpopulations with moderate and mild disease activity, IFX and ADA were equally effective regarding clinical remission at 3 months and SFCR at 12 months. In patients with severe disease activity, IFX had higher remission rates than ADA at 3 months; 70% (n=32) vs 46% (n=26) (p<0.05) and numerically at 12 months; 41% (n=14) vs 25% (n=14) (p=0.11)(Figure 1).

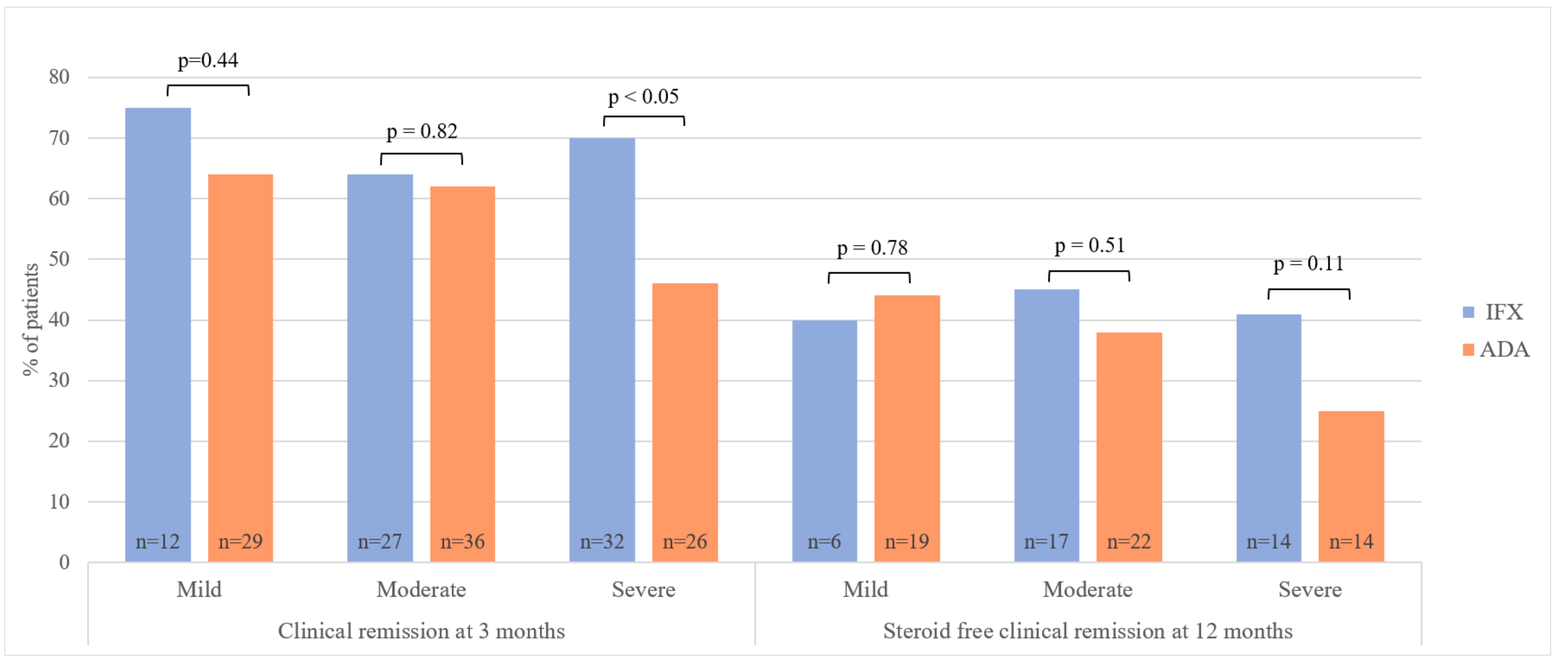

Figure 1. Remission rates - subgroup analysis according to disease severity.

Use of thiopurines during the study period was more common with IFX than ADA (76% vs 50%, p<0,05) and was associated with higher rates of SFCR at 12 months in the ADA group 44% (n=32) vs 27% (n=23) (p<0.05), but not in the IFX group; 44% (n=27) vs 40% (n=10) (p=ns). Dose escalation was more frequent with IFX than ADA (44% vs 31%, p<0.05) but did not differ between patients failing to achieve SFCR at 12 months (44% vs 37%, p=ns).

Conclusion

Adalimumab seem to have similar effect as infliximab in achieving steroid-free clinical remission after one year in bio-naive patients with ulcerative colitis. However, infliximab was associated with higher remission rate after induction therapy and subgroup analysis indicate that infliximab is superior to adalimumab in patients with severe disease. Differences in dose escalation did not seem to affect the outcomes.

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Conflicts of interest

J.Gunnarsson, G.Mavroudis – Consultant/advisory board member and/or speaker for AbbVie, Janssen, Tillotts, Pfizer, Ferring and Takeda, B.Jonefjäll – Consultant/advisory board member and/or speaker for AbbVie, Tillotts, MSD, MEDA and Takeda, T.de Lange – Shareholder and 20% position in Medtech company Augere Medical, consultation fees Ferring and Kungshusen, S.Ågren, A.Lasson – no potential conflicts of interest.

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