Clinical benefit of vedolizumab on articular manifestations in patients with active spondyloarthritis associated with inflammatory bowel disease

Vedolizumab (VDZ) is a new biological agent which was recently approved for the treatment of inflammatory bowel disease (IBD)[1] following the good clinical responses reported by clinical trials for both Crohn's disease[2] and ulcerative colitis.[3] However, the effects of VDZ on extraintestinal manifestations were not reported in these trials, and the 'real life' experience is still limited. On these premises, we read with interest the recent work by Varkas *et al*[4] reporting a series of five patients with IBD who were treated with VDZ and promptly developed new onset or exacerbation of spondyloarthritis (SpA), irrespective of the response to treatment on intestinal symptoms. Although the hypotheses proposed by the authors to explain such events sound reasonable, we would like to report our different preliminary results on the effect of VDZ on IBD-associated SpA. From June to December 2016, a treatment with VDZ was started in 53 patients. Data were collected prospectively. Patient characteristics and main results are shown in table 1. Notably, 81.1% of patients had been previously treated with at least one TNF-α inhibitor, and almost all (96.2%) were steroid dependent. Overall, 36 out of 53 patients (67.9%) completed the induction phase at last observation, and the mean follow-up of the entire cohort was 2.6±1.6 months. Eight (15.1%) patients had a history of IBD-associated SpA but were inactive at the time of initiation of VDZ, whereas 14 (26.4%) had active SpA when VDZ was started. First, no case of induction or flare of arthritis and/or sacroiliitis was reported among the entire cohort, including the patients without a prior SpA diagnosis. Second, 6 out of the 14 patients with active SpA (46.2%)—all complaining of peripheral arthropathy—experienced a sharp clinical benefit after the initiation of VDZ. About gut inflammation of these six patients, three of them were in clinical remission after 6 and 12 weeks of therapy, two were in remission after 6 weeks (they have not reached week 12 yet) and one patient did not experience any response on intestinal symptoms after 14 weeks of treatment. As a consequence, our preliminary prospective data indicate a potential benefit of VDZ on IBD-associated SpA. Even if we do not reject the possibility that VDZ may induce new onset or exacerbation of arthritis and/or sacroiliitis, the previous demonstration of α4β7 in the joint[5 6] and the recent evidence of the upregulation of mucosal vascular address in cell adhesion molecule (MadCAM-1) in the high endothelial venules of bone marrow in patients with active axial SpA[7] seem to strengthen the hypothesis of a beneficial rather than a paradoxical effect of α4β7 blockade on articular manifestations of IBD. Obviously, more details about the molecular mechanisms underlying the α4β7 blockade in the joints are required, and large cohort studies are needed to provide more evidence on these preliminary findings.

Table 1 Characteristics of patients and main results

Variable	n=53
Age (years), mean±SD	51.5±15.7
Male gender, n (%)	28 (52.8)
Smokers, n (%)	
Never	50 (94.3)
Current	2 (3.8)
Ex	1 (1.9)
Type of disease, n (%)	
Crohn's disease	34 (64.2)
Ulcerative colitis	19 (35.8)
Duration of disease (years), mean±SD	13.6±9.4
Localisation of the disease, n (%)	
Crohn's disease	
Ileal	3 (8.8)
Ileocolic	26 (76.5)
Colic	4 (11.8)
Upper gastrointestinal tract*	1 (2.9)
Perianal disease	7 (20.6)
Ulcerative colitis	
Proctitis	0 (0.0)
Left-sided	6 (31.6)
Extensive	13 (68.4)
Behaviour (Crohn's disease), n (%)	
Inflammatory	16 (47.1)
Stricturing	17 (50.0)
Fistulising	1 (2.9)
Previous resections (Crohn's disease), n (%)	21 (61.8)
Previous biological treatments	
Yes	43 (81.1)
No (naïve to biologics)	10 (18.9)
Steroid-dependent, n (%)	51 (96.2)
IBD-associated SpA	
No history	31 (58.5)
History (inactive at initiation of VDZ)	8 (15.1)
Active at initiation of VDZ	14 (26.4)
Peripheral arthropathy	12 (85.7)
Axial and peripheral arthropathy	2 (14.3)
Clinical benefit on SpA following initiation of VDZ (n=14)	
No clinical benefit	8/14 (57.1)
Improvement	6/14 (42.9)
New onset/exacerbation of SpA induced by VDZ	0

*In addition to an ileocolic localisation.
IBD, inflammatory bowel disease; SpA, spondyloarthritis; VDZ, vedolizumab.

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