Letter to the Editor

Successful Vedolizumab Therapy in a Sixteen-Year-Old Boy with Refractory Ulcerative Colitis

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Here we would like to share our first experience of a paediatric patient with refractory ulcerative colitis [UC] successfully treated with vedolizumab.

A 13-year-old boy presented at our outpatient clinic with abdominal pain, bloody diarrhoea, and weight loss. Ileocolonoscopy showed a continuous colitis extending throughout the entire colon [Mayo endoscopic score 3], with no abnormalities seen at gastroduodenoscopy. The diagnosis of UC was established. Patient was prescribed oral steroids and 5-aminosalicylic acid [ASA]. Because of steroid dependency azathioprine was started, and after 6 months infliximab was initiated because of persistent disease activity. On this regimen clinical and biochemical remission was achieved. After 2 years the boy again developed a severe pancolitis, with invalidating symptoms ( paediatric ulcerative colitis activity index [PUCAI] score 85) and a faecal calprotectin [FCP] level of 690 µg/g. Despite halving the dose interval of infliximab and switching to adalimumab, his clinical condition did not improve. According to the current guidelines, a subtotal colectomy would be the next therapeutic step. Because of the recent promising results regarding efficacy and safety of vedolizumab in adult refractory UC, the patient and his parents consented to off-label treatment with vedolizumab. The boy was aged 16 years when monotherapy with vedolizumab [Entyvio®, Takeda] was initiated. Before initiation of therapy, an endoscopic evaluation was performed showing a severe ulcerative colitis [Mayo endoscopic score 3, Figure 1A]. After the first two doses of vedolizumab, his clinical condition improved dramatically. At 8 weeks post induction of the drug, endoscopic assessment demonstrated complete mucosal healing [Mayo endoscopic score 1, Figure 1B]. The PUCAI score had improved to 5. At 4 months post induction, no side effects of vedolizumab have been mentioned and no infusion reactions have occurred so far.

Ulcerative colitis [UC] is a chronic inflammatory bowel disorder; 15–20% of UC patients develop their first symptoms in childhood. Colectomy is considered as ultimate rescue option in case of refractory disease. However, surgical complications occur in up to 49% of children; colectomy has been associated with decreased infertility later in life, and [temporary] ileostomy in adolescents negatively influences psychosocial development. Current therapeutic strategies in paediatric UC are therefore aimed at postponing surgery, preferably beyond childbearing age. In adults, vedolizumab

Figure 1. Endoscopic image prior to administration of vedolizumab, showing severe colitis with ulcers [A]; and colon 8 weeks after induction of vedolizumab, showing mucosal healing [B].
has been reported to be statistically significantly superior to placebo in refractory UC and has not been associated with an increased incidence of serious adverse events. In paediatric UC, data on efficacy and safety of vedolizumab are currently not available in literature. This case report shows that also in paediatric patients, vedolizumab seems to have the potential to delay the need for colectomy which has been associated with significant short-term and long-term complications. Further studies are needed before implementation of vedolizumab in the therapeutic armamentarium.

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**References**