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Medium to long-term outcomes in patients receiving accelerated dose infliximab induction for acute severe ulcerative colitis (ASUC) in a multi-centre cohort

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Background: We have shown that the use of accelerated dose (AD) induction of infliximab (IFX) reduces short-term colectomy rates in ASUC, but long-term data are limited. The aim of this study was to evaluate medium to long-term outcomes in patients receiving IFX induction for ASUC, comparing AD induction and standard dose (SD) induction.

Methods: Retrospective study of all consecutive patients admitted with corticosteroid-refractory ASUC in 4 tertiary referral centres within the INITIative IBD research network (www.initiativeibd.ie). Patients received rescue IFX either as Standard dose (SD) induction (Weeks 0, 2, 6) or AD induction (<42 days) from January 2010 to September 2017. AD induction has been in routine clinical use since 2014. SD patients were sub-divided based on the time period of IFX rescue: historical SD group (SD1) [2010–2013] and current SD group (SD2) [2014–2017]. Demographics were collected at time of induction. Primary end-point was time to colectomy, with secondary end-point of time to IFX discontinuation in those completing induction.

Results: A total of 145 patients received rescue IFX for steroid refractory ASUC (AD = 58, SD1 = 32, SD2 = 55). Disease severity at induction was comparable between the AD group and SD1, but SD2 had less severe disease. Median CRP was 39, 44, and 20 mg/l for groups AD, SD1 and SD2, respectively (p = 0.026, Kruskal–Wallis). Median CRP: albumin ratio was 1.4, 1.8, and 0.6 for groups AD, SD1 and SD2, respectively (p = 0.016). Median follow-up for each group was 1.9, 4.9, and 1.5 years. Kaplan–Meier survival analysis (Figure 1) revealed a significant difference in time to colectomy across the groups, with higher rates of colectomy in SD1 original group (log-rank p = 0.0013). No significant difference was observed between AD and SD2 (log-rank p = 0.32).123 (84%) completed IFX induction, receiving maintenance therapy. Time to IFX discontinuation was significantly shorter in SD1 group, and comparable between AD and SD2 current (log-rank p = 0.009).

Figure 1. Kaplan–Meier curve showing estimates of proportion of patients requiring colectomy with time, comparing patients who had SD (blue), SD2 (green) and AD (red) IFX induction for steroid-refractory ASUC.

Figure 2. Kaplan–Meier curve showing estimates of proportion of patients with loss of response to infliximab (IFX) with time, comparing patients who had SD1 (blue), SD2 (green) and AD (red) IFX induction and received maintenance for steroid-refractory ASUC.

Conclusions: Time to colectomy is significantly prolonged with use of accelerated dose IFX in selected ASUC patients with more severe disease. The historic use of standard IFX induction for all ASUC patients is associated with inferior long-term outcomes. These data further support the use of AD IFX induction in selected patients with corticosteroid-refractory ASUC.

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Pre-operative vedolizumab treatment and postoperative complications in patients with inflammatory bowel disease: A systematic review and meta-analysis

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Background: Vedolizumab is a gut-selective monoclonal antibody approved for the treatment of Crohn’s disease (CD) and ulcerative colitis (UC) in North America and Europe. While vedolizumab has generally been shown to have a favourable safety profile, its impact on postoperative outcomes remains unclear as several recent studies have reported conflicting results. This systematic review and meta-analysis was performed to assess the impact of pre-operative vedolizumab treatment on the rate of postoperative complications in patients with inflammatory bowel disease (IBD) undergoing major abdominal surgery.

Methods: A systematic search of multiple electronic databases from inception until May 2017 was conducted using the keywords [“inflammatory bowel disease” or “ulcerative colitis” or “crohn*”] and [“vedolizumab” or “entyvio”] as well as MeSH terms. Studies reporting rates of postoperative complications in IBD patients treated with pre-operative vedolizumab compared with IBD patients treated with either anti-tumour necrosis factor (TNF) medications or no biologic therapy were included. Studies were excluded if they lacked a non-vedolizumab treated comparison cohort, or if the study population was comprised of only paediatric patients. Outcomes of interest were postoperative infectious complications and total overall postoperative complications. Poole risk ratios (RRs) and 95% confidence intervals were estimated using the random-effects model. The quality of the studies was assessed using the Newcastle-Ottawa Scale.

Results: Four observational studies and one post-hoc analysis of a randomised control trial were identified. Overall, 307 vedolizumab