

Background

The Crohn's disease (CD) exclusion diet (CDED) induced remission and decreased objective markers of inflammation in pediatric, adolescence and adult populations in randomized clinical trials. These studies mostly included CD patients suffering from uncomplicated, mild-to-moderate diseases with an inflammatory phenotype. During the past 3 years, the CDED has become a common therapeutic intervention by our physicians and dieticians for a wider range of CD populations. Therefore, in this observational study, **we aimed to describe our real-world experience with the CDED.**

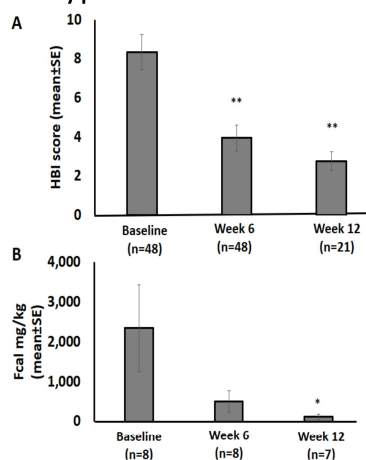
Methods

- A retrospective cohort study, documenting the experience with the CDED, between January 2018 and November 2021 (N=220) at the IBD unit of the Tel Aviv Medical Center. Patients' medical background, medical therapy, clinical and biochemical disease activity were documented from medical records before and after the induction phase of the CDED
- We included CD patients who were recommended the CDED by their treating physician and/or dietician and agreed to adhere to the diet (n=152). Patients were excluded due to a non-active disease (by either clinical, biomarker or endoscopic criteria), lack of medical information, previous experience with the CDED, patient's unwillingness to try the diet, and if carrying a stoma
- Clinically active disease at baseline was defined by the Harvey Bradshaw index (HBI) ≥ 5 (n=48)
- Clinical improvement at week 12** was calculated as the difference between baseline and follow-up HBI score (Δ HBI)
- Clinical remission at week 12** was defined as HBI<5 points

Results

- The majority of patients were treated with the CDED as a sole therapy (42.1%), adjuvant therapy (23.7%) or as a bridge to biologics (20.4%)
- Mean length of follow-up was 14.8 ± 9.4 weeks. Dietician's assessment of adherence to the diet was rated as: not adherent (23.1%), partially adherent (20.0%), and highly adherent (56.9%)
- Clinical improvement rate (Δ HBI) at week 12 was 2.6 ± 3.4 (range -4 to 15)
- Clinical and biochemical disease activity decreased gradually among patients with a clinically active disease (Figure 1)
- Clinical improvement was positively associated with adherence to the CDED (Figure 2, 3)
- Clinical remission rate at week 12 was 62.5% (30/48). There was no difference among subgroups of patient demographics, disease phenotype, medical or surgical history, and adaptations made to the diet (Figure 3)

Fig. 1 Disease activity throughout the dietary phases



*P<0.05, **P<0.001, significant differences from baseline levels, Wilcoxon matched pair signed-rank test; Fcal – Fecal calprotectin

Fig 2. Clinical improvement (HBI) at week 12 by adherence to the CDED

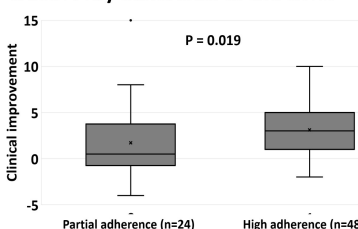
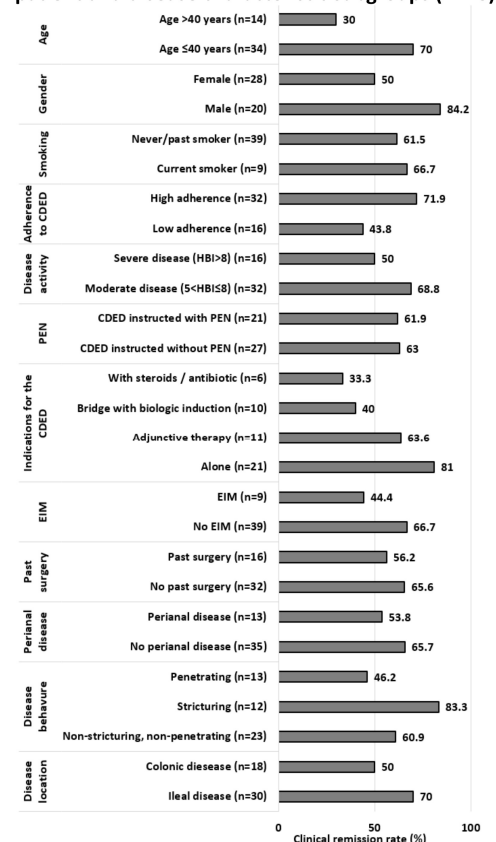


Fig 3. Clinical remission rate at week 12 across patient and disease characteristic subgroups (n=48)



Conclusions

CDED maybe an effective intervention for a wide range of clinical presentations of CD patients. High adherence to therapy, but not patient or disease characteristics, was associated with achieving clinical remission