Differences in pharmacological IBD-treatment between adolescents in pediatric care versus young adults in adult care.

– a Swedish nationwide register-based cohort study 2008–2024.

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BACKGROUND

Most advanced drugs, that have been introduced in adult IBD care during recent decades, have not yet been approved for treating pediatric IBD patients (<18 years of age). Moreover, the organization of care differs between pediatric and adult IBD-care, and it is possible that the intensity of follow-up impacts the choice of IBD-treatment. Studies investigating potential differences in provided treatments to teenagers respectively young adults with IBD are however scarce. This population-based study aimed to compare pharmacological treatment between adolescent (ADO) IBD-patients in pediatric care versus young adult (YA) IBD-patients in adult care.

METHODS

Through the Swedish National Patient Register and the Swedish IBD Quality Register (SWIBREG), we identified, 4,595 ADO (diagnosed at age 13–17 years) IBD-patients (CD: 2,104; UC: 2,110; IBD-U: 381) managed in pediatric care, and 6,937 YA (diagnosed at age 18–23 years) IBD-patients (CD: 2,675; UC: 3,717; IBD-U: 545) managed in adult care between 2008 and 2024. Patients were followed until reaching age 18 (ADO), age 23 (YA), or the end of the study period whichever came first, with a median follow-up duration of 1.9 years (Range 0-5). Drug exposures for each patient were identified through the Prescribed Drug Register, and SWIBREG.

RESULTS

As presented in Table 1, the cumulative incidence of advanced therapy exposure during the study period was comparable between the two cohorts (ADO 29% vs YA 28%). TNFα-inhibitors were by far the most common first used class of advanced therapies in both cohorts; infliximab was more frequently used in the ADO cohort, and adalimumab in the YA cohort. YA patients more often switched to therapies beyond TNFα inhibitors (Figure 1). A significantly larger proportion of both CD- and UC-patients in the ADO cohort were prescribed immunomodulators than in the YA cohort (Table 1). CD-patients in the ADO cohort were more often prescribed oral 5-ASA (Figure 2), while UC patients in the YA cohort used more local 5-ASA treatment (Table 1). Systemic corticosteroid use was more frequent among CD patients in the YA cohort, with growing differences in steroid use over the study period. In contrast, UC patients in the ADO cohort were more exposed to systemic corticosteroids (Figure 3).

CONCLUSION

Comparable cumulative incidences of advanced therapy initiation between ADO- and YA–onset IBD indicates that differences in approval status of advanced therapies in pediatric versus adult care settings did not substantially influence early therapeutic escalation.

Table 1a. Characteristics of incident IBD patients between 2008–2024 with pedriatic onset (ages 13–17 of young adult onset (ages 18–22), followed from first diagnostic listing of IBD in NPR until age 18 (adolscents) or 23 (young adults).

Table 1	IBD			CD[1]		UC[1]	
	All	Adolescents (age 13-17)	Young adults (age 18-22)	Adolescents (age 13-17)	Young adults (age 18-22)	Adolescents (age 13-17)	Young adults (age 18-22)
Total	11532 (100%)	4595 (100%)	6937 (100%)	2104 (100%)	2675 (100%)	2110 (100%)	3717 (100%)
IBD subtype[1]							
CD	4,779 (41%)	2,104 (46%)	2,675 (39%)	2,104 (100%)	2,675 (100%)	0 (0%)	0 (0%)
UC	5,827 (51%)	2,110 (46%)	3,717 (54%)	0 (0%)	0 (0%)	2,110 (100%)	3,717 (100%)
IBD-U	926 (8%)	381 (8%)	545 (8%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Sex							
Males	6,182 (54%)	2,599 (57%)	3,583 (52%)	1,192 (57%)	1,308 (49%)	1,189 (56%)	1,997 (54%)
Females	5,350 (46%)	1,996 (43%)	3,354 (48%)	912 (43%)	1,367 (51%)	921 (44%)	1,720 (46%)
Age at first IBD diagnosis[2]							
13-17	4,595 (40%)	4,595 (100%)	0 (0%)	2,104 (100%)	0 (0%)	2,110 (100%)	0 (0%)
18-22	6,937 (60%)	0 (0%)	6,937 (100%)	0 (0%)	2,675 (100%)	0 (0%)	3,717 (100%)
Year of first IBD diagnosis[2]							
2008-2015	5,299 (46%)	2,033 (44%)	3,266 (47%)	948 (45%)	1,270 (47%)	936 (44%)	1,790 (48%)
2016-2024[3]	6,233 (54%)	2,562 (56%)	3,671 (53%)	1,156 (55%)	1,405 (53%)	1,174 (56%)	1,927 (52%)
IBD drug exposure[5]							
Corticosteroids[6]	8,864 (77%)	3,407 (74%)	5,457 (79%)	1,436 (68%)	2,178 (81%)	1,703 (81%)	2,883 (78%)
Oral corticosteroids[6,7]	8,097 (70%)	3,129 (68%)	4,968 (72%)	1,392 (66%)	2,141 (80%)	1,482 (70%)	2,455 (66%)
Local corticosteroids[6,8]	3,252 (28%)	1,230 (27%)	2,022 (29%)	253 (12%)	267 (10%)	885 (42%)	1,628 (44%)
5-ASA[6]	8,180 (71%)	3,492 (76%)	4,688 (68%)	1,201 (57%)	894 (33%)	1,992 (94%)	3,412 (92%)
Oral 5-ASA[6]	7,514 (65%)	3,352 (73%)	4,162 (60%)	1,183 (56%)	832 (31%)	1,877 (89%)	2,973 (80%)
Local 5-ASA[6]	3,545 (31%)	1,161 (25%)	2,384 (34%)	150 (7%)	193 (7%)	935 (44%)	2,059 (55%)
Immunomodulators[6]	5,199 (45%)	2,580 (56%)	2,619 (38%)	1,429 (68%)	1,363 (51%)	967 (46%)	1,098 (30%)
Advanced therapy[9]	3,233 (28%)	1,311 (29%)	1,922 (28%)	820 (39%)	1,019 (38%)	426 (20%)	809 (22%)
Any IBD drug exposure	10,845 (94%)	4,348 (95%)	6,497 (94%)	1,966 (93%)	2,452 (92%)	2,041 (97%)	3,566 (96%)

[1] At start of follow-up Based on the first diagnosis in SWIBREG if the patient has a CD or UC diagnosis in SWIBREG. Otherwise based on the first two diagnostic listings of IBD in NPR (CD if both are K50, UC if both are K51, otherwise IBD-U).
[2] Based on the date of the first diagnostic listing of IBD in NPR.[3] Patients diagnosed with IBD in December 2024 could not be included due to the data linkage process.[4]At end of follow-up. Based on NPR, see Shrestha et al. (2020) "The use of ICD codes to identify IBD subtypes and phenotypes of the Montreal classification in the Swedish National Patient Register". Highest attained during follow-up (i.e. from the date of first diagnostic listing of IBD in NPR until age 18 (pediatric onset) or 23 (adult onset)).[5] During follow-up (i.e. from the date of first diagnostic listing of IBD in NPR until age 18 (pediatric onset) or 23 (adult onset)).[6] Based on PDR.[8] Oral budesonide included.[9] Oral budesonide excluded

Nonetheless, distinct prescribing patterns were observed. Immunomodulators remained central in ADO IBD, whereas YA patients more often transitioned to biologics beyond TNFα inhibitors. Higher 5-ASA use in ADO CD might be explained by the advocated cautiousness in pediatric guidelines to rely on the subclassification of young IBD-patients with mild colonic disease. The more frequent use of local 5-ASA therapy in YA may reflect clinical routines, treatment philosophy, and patient autonomy. The decline in corticosteroid use in ADO CD may be attributed to the increased use of exclusive enteral nutrition, while higher steroid exposure in ADO UC may suggest a more severe phenotype.

These findings suggest that some of the differences in pharmacological treatments between the two cohorts could be explained by differences in disease severity, phenotype and stage of cognitive development but also that early treatment strategies for young IBD patients seem to be influenced by organizational and regulatory factors.

Figure1: Sankey-plot. AT 2016-2024 all patients.

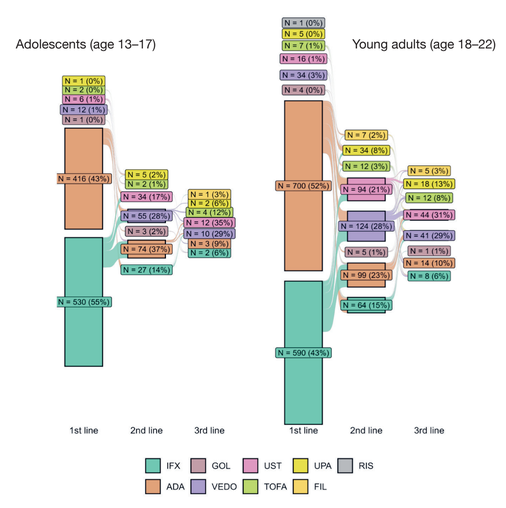


Figure 2: Cumulative incidence of 5-ASA

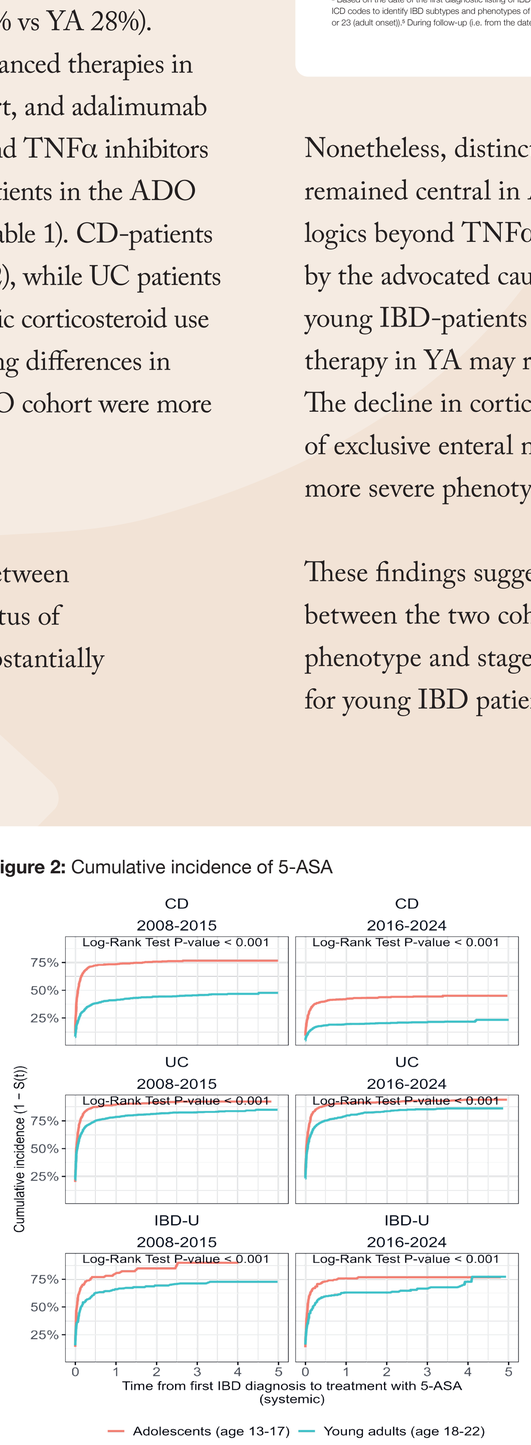
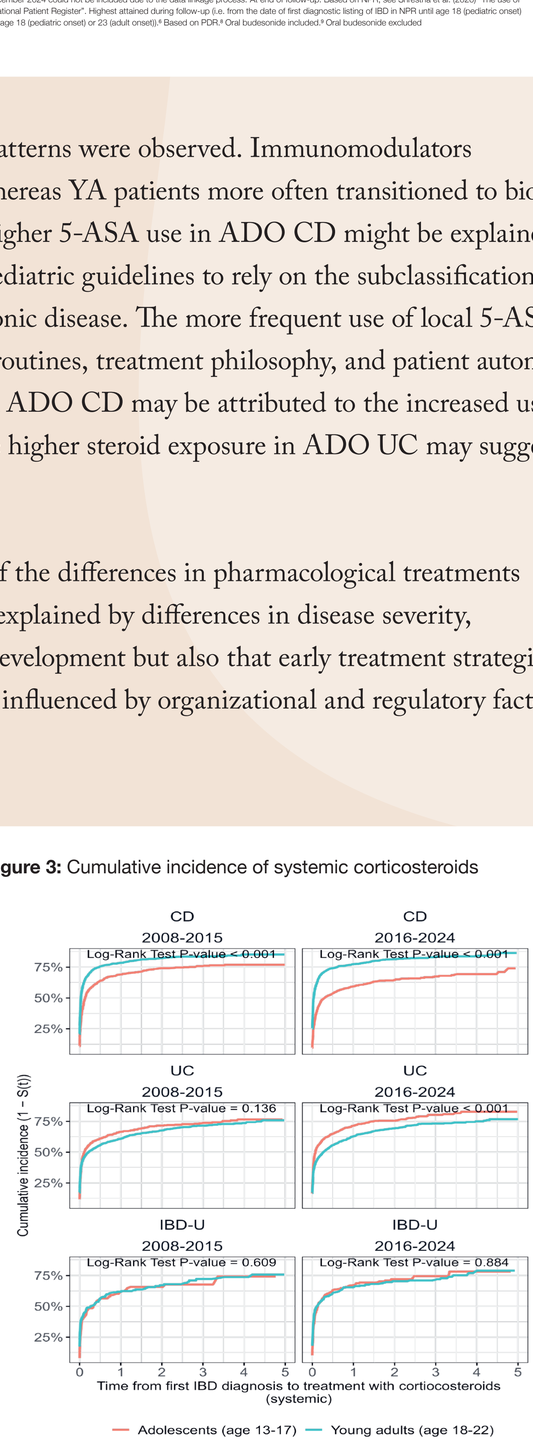


Figure 3: Cumulative incidence of systemic corticosteroids



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Data on surgery and health care consumtion is collected and will be presented in the full article and in upcoming abstracts.