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Trends in diagnostic prevalence and treatment patterns of adult ulcerative colitis patients in the USA, 2007–2017

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Background: There has been much variation between epidemiological studies that report the prevalence of ulcerative colitis (UC). This study aimed to analyse the diagnostic annual prevalence rates and treatment patterns of UC patients in the USA (U.S) adult insured population from 2007 to 2017.

Methods: Trends in UC prevalence were calculated for the 11-year period covering January 1, 2007 to December 31, 2017. Adult (18+ years old) UC patients were included in this retrospective analysis of medical and pharmacy claims data from the IBM Marketscan Commercial, Medicaid and Medicare-Supplemental Claims database. Prevalence was determined as having ≥1 UC diagnostic codes (ICD-9: 556.x; ICD-10:K51.x) within the calendar year. Patients with a Crohn's disease diagnosis (ICD9: 555.x; ICD-10: K50.x) were excluded. Prevalence rates in the database were determined and age- and gender-adjusted rates were projected to the U.S. population in 2017. Trends in treatment patterns were also analysed.

Results: The UC adult prevalence increased from 0.25% to 0.39% from 2007 to 2017. The mean age between 2007 and 2017 ranged from 41.75–49.31 years. Consistently throughout the years, approximately half of the UC patients were male. Rates of use of biologics and corticosteroids increased, while rates of 5-ASA and opioids decreased. Immunomodulators remained stable (Figure 1).

Variable	N=58,367
Gender	
Male	27,368 (46.9%)
Female	30,999 (53.1%)
Mean Age (SD)	50.20 (15.20)
18-24 years old	3,702 (6.3%)
25-34 years old	6,431 (11.0%)
35-44 years old	9,589 (16.4%)
45-54 years old	14,270 (24.4%)
55-64 years old	16,097 (27.6%)
65+ years old	8,278 (14.2%)
Insurance	
Commercial	49,884 (85.5%)
Medicare	8,483 (14.5%)
Geographic Region	
Northeast	13,210 (22.6%)
North Central	13,528 (23.2%)
South	24,062 (41.2%)
West	7,442 (12.8%)
Unknown	125 (0.2%)
Comorbid Conditions	
Type 1 Diabetes	802 (1.4%)
Type 2 Diabetes	7,573 (13.0%)
Psoriasis	1,103 (1.9%)
Ankylosing Spondylitis	352 (0.6%)
Psoriatic Arthritis	295 (0.5%)
Uveitis	263 (0.5%)
Anthropathy	305 (0.5%)
Medications	
Biologics	7,320 (12.5%)
Immunomodulators	6,053 (10.4%)
5-ASA	29,171 (50.0%)
Corticosteroids	18,151 (31.1%)
Opioids	22,342 (38.3%)

Table 1. Characteristics of Adult Patients with ulcerative colitis (2017)

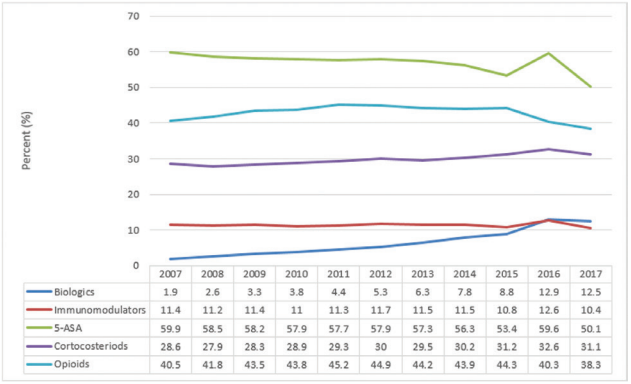

Figure 1. Trends in Treatment Patterns among Adult UC Patients, 2007–2017.

Conclusions: The prevalence of UC diagnosis codes increased between 2007 and 2017, and is projected to affect approximately 1 million US adults in 2017.

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Positive histological margins is a risk factor of recurrence after ileocaecal resection in Crohn's disease

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Background: Surgical resection is not curative in Crohn's disease (CD) and recurrence after surgery is a common situation. The identification of patients at high risk of recurrence remains disappointing in clinical practice. The impact of residual microscopic disease on margins on the risk of recurrence after ileocaecal resection is still subject to debate.

Methods: All patients who underwent ileocaecal resection between January 1982 and December 2016 were prospectively identified. Demographic data, clinical, surgical and histological variables were retrospectively collected. Positive histological margin was defined by the presence of acute inflammatory lesions on margins: erosion, ulceration, chorion infiltration by neutrophils poly- nuclears, cryptic abscesses or cryptitis.

Results: 125 patients were included, with a median follow-up of 8 years (Interquartile Range (IQR), 4.3–15.2). Half (49.6%, n = 62) were women, and the median age at surgery was 33 years (24–42). Fifty-six (44.8%) had positive inflammatory margins. Five years after surgery,, respectively, 29 (51%) and 23 (34%) patients with positive and negative margins had clinical recurrence (p = 0.034). At the end of the follow-up, respectively, 60% (n = 34) and 47% (n = 33) patients had clinical recurrence (p = 0.07). CD-related hospitalisations were observed in, respectively, 37.5% (n = 21) and 18.8% (n = 13) with positive and negative margins (p = 0.02). Fourteen patients (25%) with positive intestinal margins were reoperated at the end of the follow-up compared with 5 patients (7%) with negative margins (p = 0.04). Multi-variate analysis confirmed that positive intestinal margin was independently associated with CD-related hospitalisation (Odds Ratio (OR), 2.5 (CI 95%, 1.1–5.5), p = 0.03) and surgical recurrence (OR, 4 (95% CI, 1.3–12.5), p = 0.01).

Conclusions: Positive histological margin, as defined by the presence of erosion, ulceration, chorion infiltration by neutrophils polynuclears, cryptic abscesses or cryptitis, was associated with an increased risk of clinical and surgical recurrence after ileocaecal resection for Crohn's disease.

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Vedolizumab treatment for pouch inflammation

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Background: Pouchitis is the most common complication in UC patients following total proctocolectomy with ileal pouch anal anastomosis surgery, with a reported cumulative prevalence ranging from 23% to 46%. Oral antibiotic therapy is the mainstay treatment, however, 10–15% of patients with pouchitis develop chronic antibiotic-dependent/refractory pouchitis or Crohn's-like disease of the pouch (CLDP) requiring treatment escalation to immuno-modulatory or biologic therapy. Our aim was to evaluate the safety and efficacy of vedolizumab in patients with antibiotic-dependent/refractory pouchitis.
Methods: We performed a retrospective chart review of patients with chronic antibiotic-dependent or refractory pouchitis who were treated with vedolizumab (300 mg at week 0, 2, 6 and 14) and were followed at the Tel Aviv Medical Center. Data collected included demographics, Pre and post-pouch therapy, modified pouch disease activity index (mPDAI) and serum C-reactive protein (CRP). The effectiveness of vedolizumab treatment was based on mPDAI and CRP level at Weeks 14 and 22.
Results: We identified 10 patients (7 males, median age 58 years) after IPAA with chronic antibiotic-dependent or refractory pouchitis, who were treated with vedolizumab; their baseline characteristics shown in Table 1. Of these patients, 7 had concomitant pre-pouch ileal inflammation and 3 had cuffitis. Six of these patients were previously treated with TNF-inhibitors for their pouch inflammation. The mean mPDAI dropped from 6.7 (range 5–10) to 3.6 (range 2–7), this was statistically significant ($p = 0.05$), as shown in Table 2 and graph 1. CRP levels remained stable throughout Week 22 (mean 9.85, range 2.1–20.7). No serious side effects were recorded, and all patients were off antibiotic therapy.
Conclusions: Vedolizumab is both safe and effective in patients with antibiotic-dependent/refractory pouchitis, and in patients with concomitant pre-pouch ileitis.

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Genetic predisposition and thiopurine-induced pancreatitis in inflammatory bowel disease patients

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Background: Thiopurines, Azathioprine and 6-Mercaptopurine, remain an important treatment in both Crohn's disease (CD) and ulcerative colitis but are responsible for several side effects, such as acute pancreatitis (AP) in 3 to 7% of cases. The underlying mechanism of this dose-independent immune-mediated allergic reaction is still unknown. Genetic variability of enzymes intervening in thiopurine metabolism is known to influence adverse events linked to thiopurines. Results for inosine triphosphate pyrophosphatase (ITPA) are controversial. Recent studies on HLA polymorphism demonstrated a significant link between single-nucleotide polymorphism (SNP) rs2647087 and thiopurine-induced pancreatitis (TIP).[1,2]
Methods: Out of 59 patients from five Belgian hospitals with a history of TIP, 42 met the eligibility criteria for AP linked to thiopurine with a positive temporal relationship (< 4 weeks after thiopurine exposure) and exclusion of other causes of AP. A fully custom PCR amplicon-based target enrichment kit was developed based on the TruSeq Custom amplicon (TSCA) technology from Illumina (Illumina, San Diego, CA, USA). The design of the kit targeted ITPA, HLA-DQA1-HLA-DRB1, but also ABCC4, TPMT, MTHFR and GSTM1, known to intervene in thiopurine metabolism.
Results: Our cohort showed high rates of known risk factors for TIP such as CD (88.1%), women (73.8%) and smoking habits (50%). AP were mild or moderate and no early or late complication regarding AP was reported. Hospitalisation rate was 42.9% with a median stay of 6.1 ± 5.43 days. No significant link between ITPA, ABCC4, TPMT, MTHFR, GSTM1 polymorphism and TIP could be found. However, in this cohort, SNP rs2647087 located on HLA-DQA1-HLA-DRB1, was found in high proportions (Allele frequency (AF)=0.476). This AF is similar to Heap et al.'s findings (AF = 0.48–0.49) who demonstrated a significant link between this SNP and TIP (OR = 2.59, $p = 2 \times 10^{-16}$) [1] and slightly lower than Wilson et al.'s results (AF = 0.69) (OR = 15.83, $p = 0.0001$).[2]
Conclusions: TIP is a serious adverse event with important rate and duration of hospitalisation. Prevalence for HLA variant rs2647087 in this TIP cohort is significantly high. Results are similar than in previous studies where heterozygous and homozygous variants experienced a significant increased risk of TIP. Genotyping rs2647087 could be implemented in daily practice when discussing treatment options. Together with TPMT testing, it could be an interesting tool for guiding the physician and the patient in deciding whether or not it is appropriate to initiate thiopurine therapy. No association between ITPA polymorphism and TIP was observed.

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Feasibility and safety of strictureplasties performed by laparoscopic approach for complicated Crohn's disease: A prospective observational cohort study

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