Tofacitinib Adherence and Outcomes in Patients with Refractory Crohn's Disease

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BACKGROUND

Tofacitinib (TFB) is a janus kinase inhibitor that has demonstrated improved remission rates over placebo in Ulcerative Colitis (UC). While similar benefits have not been observed in Crohn's Disease (CD), TFB continues to be utilized off label given the high rate of refractory disease in CD. Tofacitinib is the first oral maintenance medications and therefore requires daily administration.

AIM

This study reports adherence to TFB in a cohort of patients (pts) with severe and refractory CD, while also assessing clinical, endoscopic and histologic outcomes.

METHODS

This is a retrospective study of CD pts started on TFB at a tertiary care inflammatory bowel disease (IBD) center.

Outcomes:

- TFB Adherence (as measured by Proportion of Days Covered)
- TFB discontinuation, IBD-related hospitalizations or surgery, prednisone use
- Endoscopic outcomes (if ≥ 60 d from TFB initiation)

Statistical analysis: Wilcoxon signed rank matched pairs test.

Proportion of Days Covered (PDC)

PDC is an objective marker to assess medication adherence using fill data from our center's specialty pharmacy.

$$PDC = \frac{\text{total days covered by medication fills}}{\text{total days pt was prescribed TFB during the observation period}} \times 100\ \%$$

PDC of 80-100% is a marker of adequate adherence.

RESULTS

Table 1. Patient Characteristics.

Total patients, n	**19**
Age (years, range)	36 (19, 72)
Duration of follow up (days, range)	347 (60, 1053)
Female (n, %)	8 (42.1%)
BMI (kg/m^2, range)	26 (17, 51)
CD Disease Location (n, %)	
Colonic	11 (57.9%)
Ileal	3 (15.8%)
SB/LB	2 (10.5%)
Isolated Upper GI	2 (10.5%)
Pan-GI	1 (5.3%)
Disease Features (n, %)	
Stricturing	9 (47.4%)
Fistulizing	10 (52.6%)
Perianal Disease	5 (26.3%)
Prior IBD-related surgery (n, %)	9 (47.4%)
Multiple (≥ 2) Biologic History (n, %)	**19 (100%)**
≥ 3 Biologic History (n, %)	**17 (89.5%)**
Vedolizumab	16 (84.2%)
Infliximab	14 (73.7%)
Adalimumab	11 (57.9%)
Ustekinumab	8 (42.1%)
Certolizumab	3 (15.8%)

Table 2. Endoscopic and histologic outcomes.

Total Patients, n	**13**
Median Time to endoscopy	112 d (75-262)
Endoscopic Response	**6/13 (46.1%)**
Endoscopic Remission	2/13 (15.3%)
Histologic Remission	2/13 (15.3%)

RESULTS

Mean Proportion of Days Covered (PDC) was 93.1 ± 8.1% (n=7), with only one PDC less than 80%.

Table 3. Tofacitinib Discontinuation, Follow-Up.

Total Patients, n	19
Median Duration on TFB (days, range)	248 (45 – 917)
Patients decreased to 5mg BID (maintenance)	9
Tofacitinib Discontinuation (n, %)	**8 (42.1%)**
Lack of response	**6 (31.5%)**
Loss of response	**1 (5.2%)**
Adverse effect	**1 (5.2%)**
Biologic started after TFB Discontinuation	8
Adalimumab	2
Infliximab	1
Certolizumab	1
Ustekinumab	1
IVIG	1
Hospitalization	7
IBD-related Surgery	0
Prednisone Use	3

CONCLUSION

- **This cohort had severe and refractory CD, with all pts previously failed at least two biologic agents and most (89%) had failed 3 or more biologics.**
- **Adherence to Tofacitanib, a twice daily oral medication, as measured by PDC was excellent.**
- **TFB use was safe in this cohort, as the most common cause of TFB discontinuation was lack of response (n = 6), with only one discontinuation due to adverse effects.**
- **Endoscopic response to Tofacitanib was adequate.**