

Using digital monitoring during the COVID pandemic to streamline outpatient appointments

Walsh A, Matini L, Wilson J, Lyden S, Al-Hillawi L, White L, Kantschuster R, Kormilitzin A, Smith T, Reilly S, Slater J, Brain AO, Palmer R, Ambrose T, Satsangi J, Travis SPL

Background

Demand for outpatient appointments (OPAs) for IBD often exceeds capacity, partly due to scheduled follow up of patients who are well. The TrueColours-IBD (TC-IBD) platform and Escalation of Therapy or Intervention (ETI) calculator was trialled as a tool to triage appointments during the pandemic

Methods

TC-IBD is a web-based programme of email prompts linked to validated disease-specific indices. The ETI calculator was created after logistic regression showed that patient-reported symptoms and quality of life could calculate the probability of therapy escalation or intervention during an OPA. A score ≤ 20 equates to $\leq 10\%$ chance of escalation

The ETI calculator was developed for UC, but it was also applied to CD during the pandemic, replacing the SCCAI score with HBI. From Mar-Oct 2020 the ETI calculator was used to extend 145 OPAs (87 UC, 58 CD) from 1034 ETI assessments. TC-IBD data was assessed 2-6 weeks before a scheduled OPA. Patients were eligible for OPA extension if ≥ 2 symptom (SCCAI/HBI) and 1 QoL responses (IBD Control) within 4 weeks *and* ETI score ≤ 20 . Patients with extended OPAs were monitored for 3 & 6-monthly ICHOM outcomes (www.ichom.org), collected through the TC-IBD platform

Results

ICHOM outcomes available for 113/145 patients at 3 mo and 125/145 patients at 6 mo. There were no emergency department visits, no hospitalisations, no surgery, colon cancer or death at either time point in patients whose appointment was extended. 1 patient with UC required prednisolone (Table 1).

Table 1: ICHOM Outcomes at 3 and 6 mo in patients with extended appointments

	No. patients with ICHOM data	ED visits (IBD)	Hospitalisations (IBD)	Advice line contact (reporting a flare)	Prednisolone (IBD)	Surgery	Colon cancer	Death
3m (UC)	75/87	0	0	10 (5)	1	0	0	0
6m (UC)	68/87	0	0	10 (7)	0	0	0	0
3m (CD)	58/58	0	0	5 (2)	0	0	0	0
6m (CD)	57/58	0	0	6 (2)	0	0	0	0

Of 12 reported flares of UC, 9 patients required medication change (vedolizumab re-induction +budesonide MMX (1), budesonide MMX (3), topical steroids (2), 5ASA up-titration +laxatives (2), laxatives (1)). Of 4 reported flares for CD, 3 patients required medication change (adalimumab up-titration +budesonide CIR (1), budesonide CIR (1), topical steroids (1)). Placing outcomes in context, 1536 of our patients completed ICHOM outcomes during the 6 mo period (UC 856, CD 680).

Prednisolone was given to 58 & 22, ED visits in 11 & 21, hospital admission in 20 & 21 and IBD-related operations in 4 & 14 IBD (UC & CD respectively)

Conclusion

Routine digital monitoring of symptoms, quality of life and PROMs can safely streamline outpatient care in IBD

Fig 1: Escalation of Therapy or Intervention Calculator

SCCAI/HBI	Points	+	IBD CONTROL	Points	=	TOTAL POINTS	Probability of Escalation
0	0		0	24		0	0.01
1	7		1	22		13	0.05
2	14		2	21		34	0.25
3	21		3	20		47	0.50
4	29		4	18		59	0.75
5	36		5	16		80	0.95
6	43		6	15		100	0.99
7	50		7	14			
8	57		8	12			
9	64		9	11			
10	71		10	9			
11	79		11	8			
12	86		12	6			
13	93		13	5			
≥14	100		14	3			
			15	2			
			16	0			

SCCAI, Simple Clinical Colitis Activity Index; HBI, Harvey Bradshaw Index; IBD-Control-8 (Bodger K et al, *Gut*, 2014)