Delayed clinical follow is not associated with lower SVR rates in an HCV-infected cohort in Mumbai, India

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Introduction

Hepatitis C Virus (HCV) has a prevalence of 71 million cases worldwide. Regular follow-up can be challenging for patients in low middle income countries (LMIC) due to lack of access to healthcare facilities and transportation difficulties. Our aim was to determine if delayed vs regular follow up for patients being treated for HCV with direct acting antivirals (DAA) resulted in a difference in sustained virologic response (SVR).

Methods

We conducted a retrospective cohort study of 149 patients in Mumbai, India who had received treatment for Hepatitis C from 2015 to 2021. All patients had confirmed HCV by PCR and were treated with direct acting antivirals (DAA) approved by the FDA equivalent in India. Patients were asked to present for follow up 12 weeks after end of treatment for SVR12 (sustained virologic response) testing.

Results

- 149 patients were included. 81 followed up on time (54%) and 68 did not (46%).
- The mean age at treatment in both groups was similar (51 vs 52, p = 0.29) while male/female distribution showed a significant difference (40% vs 54% male, 60% vs 46% female, p = 0.027).
- The most common genotype in the cohort was genotype 3 (52% vs 49%) and the second most common was genotype 1 (32% vs 20%). There was not a significant difference in genotypes between both groups (p = 1.0).
- History of hyperlipidemia (p = 0.12), thyroid disease (p = 0.20), and CKD (p = 0.16) did not show significant difference across both groups. On the other hand, diabetes (p = 0.026) and HTN (p < 0.01) were more prevalent in those who had delayed follow up. There was no significant difference in prior treatment experience between the two groups (p = 0.13).
- Change in AST and ALT from the initiation of treatment until SVR also did not show significant difference across both groups (p = 0.58, 0.38).
- Patients with advanced liver disease were more commonly seen in the group which did not have on-time follow up (p < 0.01).
- SVR was seen more in the group which did not follow up on time (94% vs 79%, p < 0.01).

Variable	Overall (n=149)	Delayed FU (n=68)	Regular FU (n=81)	P-value
Age (mean ± SD)	52 ± 13	53 ± 13	51 ± 13	0.29
Sex (n, %)				0.10
Male	71 (48)	27 (40)	44 (54)	
Female	78 (52)	41 (60)	37 (46)	
Genotype (n, %)				1.0
1	46 (31)	20 (20)	26 (32)	
2	1 (0.6)	0 (0)	1 (1.2)	
3	75 (50)	33 (49)	42 (52)	
4	4 (2.7)	2 (2.9)	2 (2.5)	
5	1 (0.6)	0 (0)	1 (1.2)	
Not collected	22 (15)	13 (19)	9 (11)	
DM (n, %)				0.06
No	120 (81)	50 (74)	69 (85)	
Yes	29 (19)	18 (26)	12 (15)	
HTN (n, %)				0.03
No	96 (64)	37 (54)	59 (73)	
Yes	53 (36)	31 (46)	22 (27)	
HLD (n, %)				0.18
No	144 (97)	64 (94)	80 (99)	
Yes	5 (3)	4 (6)	1 (1)	
Thyroid Disease (n, %)				1.0
No	131 (88)	60 (88)	71 (88)	
Yes	18 (12)	8 (12)	10 (12)	
CKD (n, %)				0.38
No	137 (92)	61 (90)	76 (94)	
Yes	12 (8)	7 (10)	5 (6.2)	
Treatment Experience (n, %)				0.73
Naive	101 (68)	45 (66)	56 (69)	
Experienced	48 (32)	23 (34)	25 (31)	
Liver Status (n, %)				0.03
No Cirrhosis	56 (38)	26 (38)	30 (37)	
Comp Cirrhosis	68 (46)	25 (37)	43 (53)	
Decomp Cirrhosis	25 (17)	17 (25)	8 (10)	
SVR (n, %)				< 0.01
No	21 (14)	4 (5.8)	17 (21)	
Yes	128 (86)	64 (94)	64 (79)	
Change in AST (mean ± SD)	35 ± 39	37 ± 38	33 ± 41	0.58
Change in ALT (mean ± SD)	42 ± 55	46 ± 64	37 ± 47	0.38

Table 1: Patients' baseline clinical characteristics stratified against delayed vs regular follow-up

Discussion

The likelihood of SVR was not impeded by delayed follow-up compared to regular follow-up in this cohort of infected patients. Further research is needed to determine if this is generalizable across different genotypes and geographic locations.