Primary biliary cholangitis (PBC)–autoimmune hepatitis (AIH) overlap syndrome: Characteristics and response to obeticholic acid (OCA) in TARGET–PBC, a diverse, United States (US) real– world cohort

TARGET–PBC

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INTRODUCTION

- A subset of patients with primary biliary cholangitis (PBC) have an overlap syndrome with autoimmune hepatitis
- Patients with overlap syndrome may have a poorer response to ursodeoxycholic acid (UDCA) and higher rates of progression to cirrhosis.
- The aim of this study was to compare clinical characteristics and outcomes in PBC patients with and without overlap

METHODS

Cohort

- TARGET–PBC is an ongoing longitudinal, observational cohort of patients with PBC managed according to local practice standards at 35 academic and community sites in the United States.
- Participating clinics provided redacted medical records (structured and unstructured data) from consented patients. Patient narratives, laboratory, pathology, and imaging data were extracted and stored in a secured database. Patient reported outcome (PRO) measures were also collected on an annual basis. Patients contributed blood samples to a biospecimen repository for biomarker validation and translational research.

Study Population

Our study population included 532 patients enrolled in TARGET–PBC between November 9, 2016 and February 14, 2019.

Outcome Measure

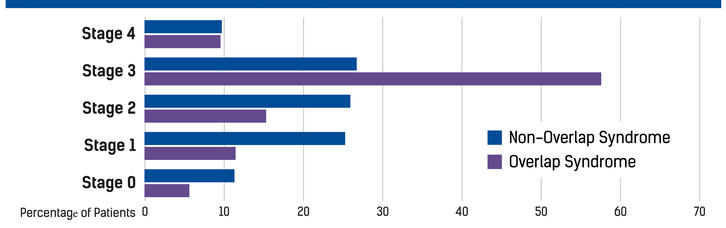
- The presence of overlap syndrome was ascertained from the time of enrollment through 2/14/19 or in the three years prior to enrollment

Statistical Analysis

The percentage of clinical characteristics among patients with PBC was calculated and compared among patients with and without the presence of overlap syndrome. Chi squared and t tests were used to assess the difference in proportions and means respectively

RESULTS

Figure 1. Distribution of fibrosis stage among patients with PBC by presence of overlap syndrome



Overlap Syndrome (N=52) Non Overlap Syndrome (N=264)

	N	%	N	%
Stage 0	3	5.8	31	11.7
Stage 1	6	11.5	67	25.4
Stage 2	8	15.4	69	26.1
Stage 3	30	57.7	71	26.9
Stage 4	5	9.6	26	9.8

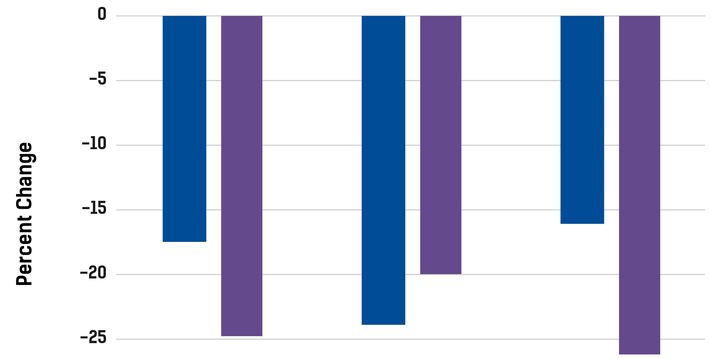
Overlap Syndrome: 32% of staging is missing
Non Overlap Syndrome: 42% of staging is missing

Table 1. Descriptive characteristics

Patient Characteristics	Patients with Overlap Syndrome (N=76) N(%)	Patients without Overlap Syndrome (N=456) N(%)
Age at Study Entry; Mean (SD)	57.7 (11.8)	61.0 (11.2)
Age at Diagnosis; Mean (SD)	51 (13.0)	52 (11.1)
Sex		
Female	66 (86.8)	412 (90.4)
Not Available	–	–
Race		
White	56 (73.7)	388 (85.3)
Black	7 (9.2)	19 (4.2)
Other	7 (9.3)	18 (3.9)
Not Available	6 (7.9)	30 (6.6)
Ethnicity		
Hispanic or Latino	16 (21.1)	76 (16.7)
Not Available	6 (8.0)	23 (5.0)
Cirrhosis		
Yes	39 (51.3)	170 (37.3)
Not Available	–	–
Decompensation		
Yes	21 (27.6)	80 (17.5)
Not Available	37 (48.7)	286 (62.7)
≥ Autoimmune Condition	41 (54.67)	93 (59.9)
Liver Biopsy	58 (76.3%)	28 (62.7%)
Not Available	–	–
Current Treatment*		
UDCA Only	33 (43.4)	311 (68.2)
UDCA,OCA(including Fenofibrate, Immunosuppresant)	10 (13.2)	65 (14.3)
OCA Only	–	3 (0.7)
Not Available	2 (2.6)	14 (3.1)
Interface Hepatitis		
Yes	37 (60.5)	76 (16.7)
Not Available	30 (39.5)	286 (62.7)
Positive Antibody Test		
Antimitochondrial	51 (67.1)	351 (77.0)
Not Available	6 (7.9)	57 (12.5)
Antinuclear	35 (46.1)	101 (22.1)
Not Available	27 (35.5)	240 (52.6)
Smooth Muscle	18 (23.7)	39 (8.6)
Not Available	38 (0.50)	271 (59.4)

* Other combination of UDCA, Fenofibrate, Immunosuppressants not shown

Figure 2. Percent change in liver enzyme levels among patients currently on OCA by presence of overlap syndrome among patients with PBC



	Alkaline Phoshatase	AST	ALT
Overlap Syndrome Participants	-17.5 (SD:23.5)	-24.0 (SD:30.51)	-16.2 (SD:36.78)
Non-Overlap Sydrome	-24.8 (SD:31.1)	-20.0 (SD:30.31)	-26.2 (SD:33.48)

CONCLUSIONS

- AIH overlap was diagnosed in 14% of this cohort
- Overlap patients were more likely to have antinuclear and smooth muscle antibodies, interface hepatitis, and advanced fibrosis, but were otherwise similar to PBC patients.
- OCA was administered to 10 overlap patients with safety and efficacy comparable to PBC patients.

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