ID# 1263

Pruritus in Primary Biliary Cholangitis is Under-Treated in Clinical Practice: Results from TARGET-PBC

Marlyn J. Mayo[1], Andrea Mospan[2], Helen Smith[3], Megan McLaughlin[3], April Thompson[3], Robert Sandefur[2], Richard C. Zink[2], Christopher Bowlus[4], Cynthia Levy[5]

[1]University of Texas Southwestern Medical Center; [2]Target RWE; [3]GSK; [4]University of California Davis; [5]University of Miami

Target RWE
Health Evidence Solutions

Introduction

- Primary biliary cholangitis (PBC) is a chronic cholestatic liver disease with debilitating symptoms including pruritus and fatigue.
- Understanding of the real-world experience of pruritus in PBC is limited; this study characterizes the population with pruritus in the TARGET-PBC cohort and describes management of pruritus.

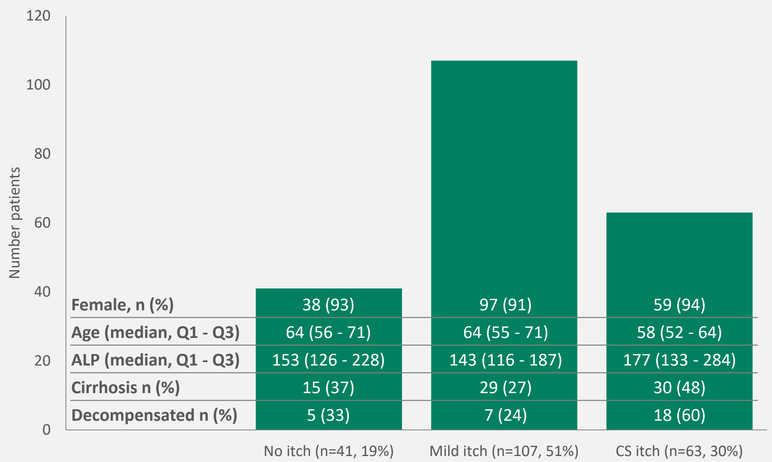
Methods

- TARGET-PBC is a longitudinal observational study of patients (n=667) enrolled at 38 US academic and community sites.
- Data are obtained from medical records and patients are requested to complete patient reported outcome (PRO) surveys.
- Responses to PBC-40 were used to grade pruritus: clinically significant (CS) itch was defined as ≥7 points on the itch domain and mild itch as ≥1 and <7[1].
- Patient characteristics, disease severity and treatment patterns were compared according to the presence and severity of itching.

Results

- 170 (81%) of the 211 patients who completed the PBC-40 reported itching; of those who reported any itch, 107 (63%) had mild itch and 63 (37%) clinically significant itch.
- The population in this analysis was 92% female, 35% cirrhotic.
- Patients with CS itch were younger (Figure 1), more frequently had cirrhosis (48 vs 27 and 36%, p = 0.03) and had higher alkaline phosphatase (177 vs. 143 and 153, p=0.002) compared to those with mild or no itch, respectively.

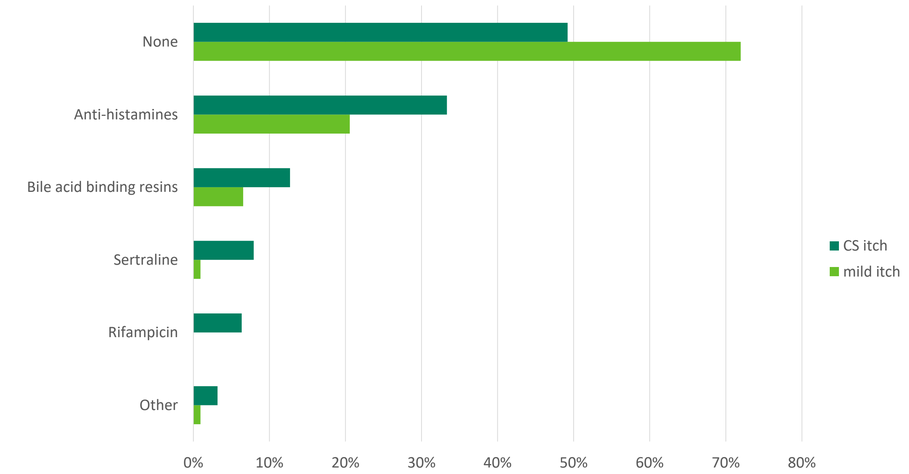
Figure 1: Patient Characteristics by PBC-40 Itch Severity



	No itch (n=41, 19%)	Mild itch (n=107, 51%)	CS itch (n=63, 30%)
Female, n (%)	38 (93)	97 (91)	59 (94)
Age (median, Q1 - Q3)	64 (56 - 71)	64 (55 - 71)	58 (52 - 64)
ALP (median, Q1 - Q3)	153 (126 - 228)	143 (116 - 187)	177 (133 - 284)
Cirrhosis n (%)	15 (37)	29 (27)	30 (48)
Decompensated n (%)	5 (33)	7 (24)	18 (60)

References:
1. Mells GF et al. Impact of primary biliary cirrhosis on perceived quality of life: the UK-PBC national study. Hepatology. 2013;58(1):273-83

Figure 2. Current Pruritus Treatment % of All Patients



Other included naltrexone (1 patient in CS and 1 patient in mild) and phenobarbital (1 patient in CS).

- Patients with CS itch were more likely to be receiving treatment for itch than those with mild itch (51% vs 28%), however 33% of patients with CS itch had never received any treatment for itch.
- Patients with CS itch were more likely to be taking multiple treatments for PBC than those with mild itch (32% vs 22%) and to be taking fenofibrate (16% vs 1%).
- Amongst those currently receiving treatment, the most common ongoing treatment for mild itch was antihistamines (73%, 22/30), primarily OTC antihistamines (18/22) and 23% (7/30) were taking bile acid binding resins; CS itch patients had a wider range of treatments with a similar proportion taking bile acid binding resins (25%, 8/32).

Conclusion

Pruritus in PBC is under-treated in clinical practice and many patients with significant itch never receive treatment.

Acknowledgements and Disclosures: TARGET-PBC is sponsored by TARGET RWE; GSK provided funding for this analysis (213259). Target RWE is a health evidence solutions company headquartered in Durham, NC. The authors would like to thank all the investigators, participants, and research staff associated with TARGET-PBC. ClinicalTrials.gov Identifier: NCT02815891.

Marilyn Mayo : Research Grants: Intercept, Target, Glaxo Smith Kline, Mallinkrodt, Salix, Cymabay; Advisor/Consultant: Target, Glaxo Smith Kline, Mallinckrodt, Cymabay, Mirum
Andrea Mospan, Robert Sandefur, Richard C. Zink are employees of Target RWE
Helen Smith, Megan McLaughlin and April Thompson are GSK employees and own stocks/shares
Cynthia Levy: 1- Research grants: Gilead, Intercept, CymaBay, Genfit, Genkyotex, Enanta, GSK, Novartis, NGM, High Tide, Durect, Alnylam, Zydus, Cara Therapeutics, Target RWE, Pliant, Mitsubishi 2- Consulting fees/Advisory boards: CymaBay, Genfit, GSK, Shire, Pliant, Target RWE, Mirum, Cara Therapeutics 3- Royalties: Up-to-date
Christopher Bowlus disclosures: Consulting for Eli Lilly, GSK, CymaBay, Gilead Biosciences, BiomX, Shire; Grant/research support from Gilead Biosciences, Intercept Pharmaceuticals, Inc., CymaBay, GSK, BMS, Novartis, BiomX

Figure 3: Current PBC Treatment

	= 0 No itch	>=1 to <7 Mild itch	>=7 Clinically significant itch
Other	0	2	1
Fenofibrate Only	0	1	1
OCA Only	0	0	1
UDCA, OCA and Fenofibrate	0	0	1
UDCA and Fenofibrate	2	0	8
UDCA and OCA	7	23	11
UDCA Only	32	81	40

Other indicates not currently taking one of the 3 defined treatments (OCA, UDCA or Fenofibrate).

- Most patients were currently taking UDCA; 95% of CS itch, 97% mild itch, 100% no itch. Fenofibrate use was more commonly used in patients with clinically significant itch.

Table 1: Differences in Co-Med Prescriptions CS vs. Mild Itch

	No Itch n (%)	Mild Itch n (%)	CS Itch n (%)
All Participants	**41 (100)**	**107 (100)**	**63 (100)**
Lactulose	2 (5)	2 (2)	11 (17)
Spironolactone	4 (10)	6 (6)	13 (21)
Pantoprazole	3 (7)	7 (7)	13 (21)
Ondansetron	0 (0)	1 (1)	8 (13)
Rifaximin	1 (2)	2 (2)	7 (11)
Oxycodone	0 (0)	1 (1)	6 (10)
Potassium	2 (5)	3 (3)	7 (11)
Levothyroxine	10 (24)	27 (25)	21 (33)
Gabapentin	2 (5)	8 (7)	9 (14)
Nadolol	4 (10)	3 (3)	6 (10)
Salbutamol	1 (2)	4 (4)	6 (10)
Insulin aspart	0 (0)	1 (1)	4 (6)
Diclofenac	1 (2)	3 (3)	5 (8)
Furosemide	5 (12)	5 (5)	6 (10)
Prednisone	2 (5)	5 (5)	6 (10)

- It appears that there may be an additional medication burden for those patients with more significant itch; there is more polypharmacy associated with CS itch as compared to no itch and mild itch.
- Although the indication for the prescriptions is not available it is possible that the increase in medication burden may be due to more advanced disease in this group (Figure 1).