EE620

Increase in HCM-Related Economic Burden Due to Atrial Fibrillation in Patients with Symptomatic Obstructive Hypertrophic Cardiomyopathy: A Claims Analysis of 9490 Patients

Michael Butzner[1], Eros Papademetriou[2], Ravi Potluri[2], Xing Liu[2], Sanatan Shreay[1]

[1]Cytokinetics, Incorporated, South San Francisco, CA, USA; [2]Putnam Associates, LLC, Boston, MA, USA

BACKGROUND

- Atrial fibrillation (AF) is common among patients with symptomatic obstructive hypertrophic cardiomyopathy (soHCM), but the burden of AF on HCM-related healthcare resource utilization (HCRU) and charges is unknown.
- Therefore, we sought to assess the economic impact of AF in patients with soHCM.

METHODS

- Symphony medical and pharmacy claims data were assessed from 2016 to 2021 to identify (by ICD-10 code) adult patients with treatment-naïve soHCM in the USA.
- We defined symptomatic as either fatigue, chest pain, syncope, dyspnea, heart failure, or palpitations within 3 months of index date and comorbid AF as AF within 3 months of index date.
- Unadjusted HCM-related HCRU and charges (per-person per-year [PPPY], in USD) were reported for the following categories: hospitalizations (number and length of stay); outpatient, emergency room, and urgent care visits; and pharmacy use.
- HCM-related was defined using the HCM standard-of-care ICD-10 code, as per guideline recommendations,[1] and was validated by an HCM cardiologist.

RESULTS

- Of 9490 patients with soHCM, 2681 (28.3%) had AF.
- Patients with vs without AF were older (median 68 vs 63 years; *P*<0.0001) and more likely to be male (48.0% vs 42.5%; *P*<0.0001) (**Table 1**).

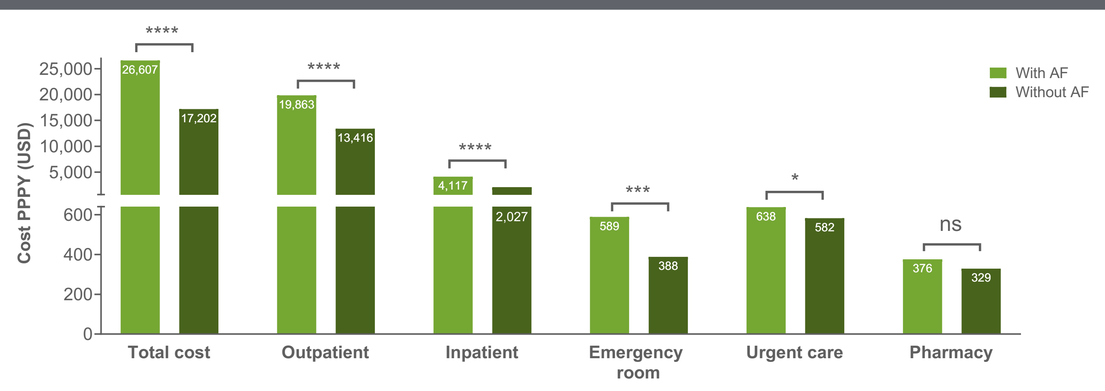
Table 1. Baseline characteristics

n (%)	Total (N=9490)	With AF (n=2681)	Without AF (n=6809)
Female	5309 (56.0)	1395 (52.0)	3914 (57.6)
Age, years			
Mean (SD)	61.8 (14.1)	65.6 (11.8)	60.4 (14.6)
Median (IQR)	64.0 (44.0–84.0)	68.0 (51.0–85.0)	63.0 (43.0–83.0)
18–34	545 (5.7)	61 (2.3)	484 (7.1)
35–44	645 (6.8)	109 (4.1)	536 (8.0)
45–54	1304 (13.7)	280 (10.4)	1024 (15.0)
55–64	2270 (23.9)	593 (22.1)	1677 (24.6)
65+	4726 (49.9)	1638 (61.1)	3088 (45.4)
Year of index treatment[a]			
2017	1885 (19.9)	556 (20.7)	1329 (19.5)
2018	2256 (23.8)	679 (25.3)	1577 (23.2)
2019	2319 (24.4)	610 (22.8)	1709 (25.1)
2020	1917 (20.2)	514 (19.2)	1403 (20.6)
2021	1113 (11.7)	322 (12.0)	791 (11.6)
Region in the USA			
Northeast	2298 (24.2)	577 (21.5)	1721 (25.3)
North Central	2474 (26.1)	704 (26.3)	1770 (26.0)
South	3411 (35.9)	1031 (38.5)	2380 (35.0)
West	1273 (13.4)	360 (13.4)	913 (13.4)
Unknown	34 (0.4)	9 (0.3)	25 (0.4)
Insurance type			
Cash	439 (4.6)	89 (3.3)	350 (5.1)
Commercial	1806 (19.0)	683 (25.5)	1123 (16.5)
Employer group	701 (7.4)	155 (5.8)	546 (8.0)
Medicaid	1138 (12.0)	249 (9.3)	889 (13.1)
Medicare	3668 (38.7)	1165 (43.5)	2503 (36.8)
PBM	679 (7.2)	125 (4.7)	554 (8.1)
Unspecified	973 (10.3)	187 (7.0)	786 (11.5)
Other[b]	86 (1)	28 (0)	58 (1)

[a] A 12-month pre-index period of no treatment was required; patients with index treatment in 2016 did not qualify for inclusion.
[b] Other includes government, processors, third-party administrator, and workers' compensation.
IQR, interquartile range; PBM, Pharmacy Benefit Manager.

- Among all patients, most were on Medicare (39%) or commercial (19%) insurance.
- Total HCM-related charges were greater for patients with vs without AF (mean $26,607 vs $17,202 PPPY; *P*<0.0001) (**Figure 1**).
- Across all healthcare resource categories, HCM-related charges were greater in patients with vs without AF, with most HCM-related total charges resulting from outpatient visits ($19,863 vs $13,416; *P*<0.0001) and hospitalizations ($4,117 vs $2,027; *P*<0.0001).

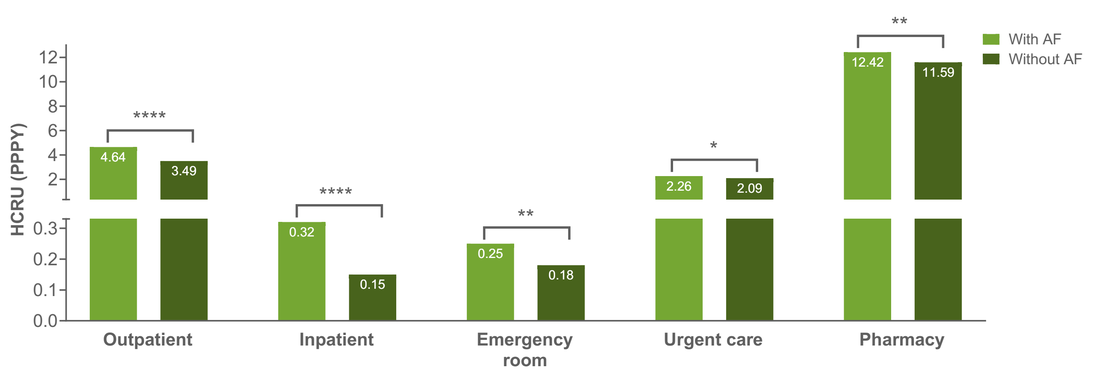
Figure 1. HCM-related healthcare charges for patients with and without AF



* *P*<0.05; *** *P*<0.001; **** *P*<0.0001.
ns, not significant.

- Patients with vs without AF averaged significantly more HCRU across all healthcare resource categories assessed (*P*<0.05) (**Figure 2**).

Figure 2. HCM-related HCRU for patients with and without AF



* *P*<0.05; ** *P*<0.01; **** *P*<0.0001.

Limitations

- These unadjusted findings could potentially be impacted by variables such as age, sex, and comorbidities.

CONCLUSIONS

- In this US-based cohort of patients with soHCM, those with vs without comorbid AF incurred significantly more HCM-related HCRU and higher costs PPPY.
- This suggests comorbid AF in soHCM is associated with a greater economic burden.
- In patients with soHCM, better management, including novel treatments, could reduce the additional economic burden in those with comorbid AF.

Reference

1. Ommen SR, et al. *Circulation* 2020;142(25):e558-e631. [published correction appears in *Circulation* 2020;142(25):e633.]

Disclosures

This study was funded by Cytokinetics, Incorporated. **MB** and **SS:** Employees of and own stock in Cytokinetics, Incorporated. **EP, RP,** and **XL:** No conflicts of interest to declare.

Acknowledgments

Editorial support for the preparation of this poster was provided by Susan Tan, PhD, on behalf of Engage Scientific Solutions, and was funded by Cytokinetics, Incorporated.

Abbreviations

AF, atrial fibrillation; HCM, hypertrophic cardiomyopathy; HCRU, healthcare resource utilization; ICD-10, International Classification of Diseases, Tenth Revision; PPPY, per-person per-year; soHCM, symptomatic obstructive hypertrophic cardiomyopathy.

Cytokinetics®

Presented at the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) Europe 2023 I Copenhagen, Denmark I November 12–15, 2023