

Healthcare resource use in transthyretin amyloidosis cardiomyopathy: An observational study in the UK clinical setting using electronic health records

EPH121

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INTRODUCTION

- Transthyretin amyloidosis with cardiomyopathy (ATTR-CM) is a condition characterised by the build-up of misfolded transthyretin proteins in the heart.
- Progressive myocardial amyloid deposition drives substantial healthcare resource use (HCRU) through recurrent hospitalizations, outpatient care and other contact points.

OBJECTIVE

 This research aims to estimate healthcare resource utilisation (HCRU) post diagnosis in ATTR-CM patients.

METHODS

- A retrospective observational study using anonymised, linked data from:

Primary care
Clinical Practice Research Datalink
 SNOMED-CT/Read codes

Secondary care
Hospital Episode Statistics
 ICD-10 codes

- Included individuals (≥ 18 years old) newly diagnosed with cardiac amyloidosis based on medical codes between January 2004 and March 2023; additional exclusion criteria were applied to define the likely ATTR-CM cohort
- Demographic and clinical data were summarised using descriptive statistics
- HCRU were assessed based on healthcare contacts after the patient's incident diagnosis until the end of patient follow-up
- Available estimates from Healthcare Resource Groups (HRGs) National Costs Grouper and published NHS tariff for GP prescriptions were applied to calculate associated costs, standardised per person per year (PPPY)

RESULTS

Study population

4,001 cardiac amyloidosis patients

Excluding 2,463 with AA, AL, MGUS, NS

1,538 likely with ATTR-CM
(363 specifically coded)

AA, serum amyloid A amyloidosis; AL, light-chain amyloidosis; MGUS, monoclonal gammopathy of undetermined significance; NS, nephrotic syndrome

Mean age: 77 years (SD: 11)

 67% male
33% female

 Mean BMI: 26.8 kg/m²
(SD: 5.5)

Median follow-up time: 1.1 years (inter-quartile range: 0.3-3.0)

Common comorbidities, N (%)¹

Heart failure

999 (65.0)

CKD stage 3 and over

503 (32.7)

CAD

592 (38.5)

Atrial fibrillation

578 (37.6)

Carpal tunnel syndrome

350 (22.8)

Dyspnoea

742 (48.2)

GI dysfunction

524 (34.1)

Hypertension

1,174 (76.3)

Treatments, N (%)²

ACEi/ARB

932 (60.6)

Beta blockers

828 (53.8)

CCB

465 (30.2)

Diuretics

389 (25.3)

MRA

336 (21.8)

Statins

845 (54.9)

SGLT2i

25 (1.6)

Cardiac pacemaker

129 (8.4)

Implantation

¹ Events occurring on or before the patient's incident diagnosis

² Prescribed between one year before the patient's incident diagnosis and incident diagnosis

ACEi, angiotensin-converting enzyme inhibitor; ARBs, angiotensin II receptor blockers; BMI, body mass index; CAD, coronary artery disease; CKD, chronic kidney disease; MRAs, mineralocorticoid receptor antagonists; SD, standard deviation; SGLT2i, sodium-glucose cotransporter 2 inhibitor

CONCLUSIONS

- Healthcare resource utilisation was high in ATTR-CM patients, especially in the first year after diagnosis, as reflected by hospital admissions for these patients
- This highlights the healthcare burden of ATTR-CM and the need for preventative strategies and early interventions

Healthcare contacts

- During follow-up, 1,241 (80.7%) of patients had one or more hospital admissions within the first year after diagnosis
- Average length of stay of 5.0 days (SD: 13.3) per admission
- Over time, patients had:

 4.2
PPPY
Inpatient admission

 12.0
PPPY
Outpatient visits

 24.1
PPPY
Primary care contacts

 1.0
PPPY
A&E visits

- Number of visits for healthcare contacts were highest in the first year post-diagnosis, decreased in second and third years and plateaued by the end of follow-up

Healthcare costs

- Average per patient costs in the first year after diagnosis:

£13,129
Total per patient

£10,279
(78.3%)
Inpatient admissions

£1,341
(10.2%)
Outpatient visits

£1,509
(11.5%)
Others

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an ANTHOLOGY study