Inflammation plays an important role in the development of atherosclerotic cardiovascular disease (CVD).

Adjusted Cox proportional regression was used to assess associations of GlycA with prevalent ABI ≤ 0.8 and CP, and linear mixed models to assess the 10-yr change in ABI and CP score.

GlycA is positively associated with prevalent low ABI, carotid plaque, and incident PAD.

MESA is an ongoing prospective cohort study including men and women free of clinical CVD at baseline and enrolled from six field sites in the United States.

The median (374.9 µmol/L) was used as reference in a Cox proportional hazards model adjusted for age, sex, race/center, education, BMI, smoking status, in-pack-years, and in physical activity. Knots were placed at the 5th, 25th, 75th, 95th, and 99th percentiles. High extreme values (GlycA levels >600 µmol/L) were excluded (n=17) from analysis.

Whether modification of GlycA through lifestyle or pharmacotherapy can reduce CVD burden.

RESULTS

Figure 1. Participant flow chart, MESA, 2000 through 2015

Figure 2. Restricted cubic spline* of GlycA with prevalence of ankle-brachial index, carotid plaque, and PAD

Table 1. Baseline characteristics of participants stratified by GlycA quartiles, MESA, 2000–2002

Table 2. Association of GlycA with Ankle-brachial index, Carotid plaque, and PAD

VALUES ARE MEAN (SD) UNLESS NOTED. *N varied due to differences in missing outcomes.

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Figure 2. GlycA with incident peripheral artery disease, MESA, 2000-2015.

REFERENCES

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OBJECTIVES

To examine the associations between GlycA with ankle branchial index (ABI), carotid plaque (CP), and peripheral artery disease (PAD).

MATERIALS AND METHODS

MESA is an ongoing prospective cohort study including men and women free of clinical CVD at baseline and enrolled from six field sites in the United States.

GlycA levels of EDTA plasma samples were measured by NMR LipidProfile® analysis conducted at LabCorp.

ABI and CP were ascertained from Doppler and ultrasound readings, respectively, at baseline, at 5 years (ABI only) and at 10-yrs, and incident PAD from hospital records.

Prevalent and incident ABI ≤ 0.8 and CP, and linear mixed models to assess the 10-yr change in ABI and CP score.

LipoProfile®

Cox proportional regression was used to assess associations of GlycA with prevalent and incident ABI ≤ 0.8 and CP, and linear mixed models to assess the 10-yr change in ABI and CP score.

Recent smoker

GlycA is positively associated with prevalent low ABI, carotid plaque, and incident PAD.

The hazard for PAD conferred by GlycA (HR/95% CI: 1.39 (1.13, 1.71)) was slightly higher than seen with hsCRP [1.28 (1.03, 1.58)].

No significant associations of GlycA with incident low ABI, carotid plaque presence, or 10-year change in ABI or carotid plaque scores (all p>0.05).

Our findings may provide potential support for the use of GlycA as an early biomarker for vascular risk.

Whether modification of GlycA through lifestyle or pharmacotherapy can reduce CVD burden requires further study.

Table 1. Baseline characteristics of participants stratified by GlycA quartiles, MESA, 2000–2002

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CONCLUSIONS

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