Patients with rheumatoid arthritis (RA) have nearly twice the risk of cardiovascular disease (CVD) compared to the general population. Besides the traditional risk factors, patients with RA also have increased risk due to chronic inflammation and elevated cytokine levels.

Specialized CV risk models for RA that include disease activity measures, disability index, duration of disease and steroid use in addition to traditional risk factors. Modern therapy including DMARDS and biologics have been shown to decrease CVD in RA populations.

We aimed to assess the prevalence of CVD risk factors including traditional (Obesity, hypertension, diabetes, dyslipidemia and smoking) as well as non-traditional ones (inflammatory markers, length of disease and disease severity among) in our RA predominantly Black population. We also examined the therapeutic patterns, compared to a predominantly White population of the Consortium Of Rheumatology Researchers Of North America (CORRONA).

Methods

• Retrospective study of patients ≥18 years old with a Principal or Secondary discharge diagnosis of Rheumatoid Arthritis (RA) identified by ICD-9 and ICD-10 codes. We included inpatient discharges between 1/2010 to 5/2017 from two large NYC hospitals with a predominantly Black population.

• Two independent investigators reviewed the cases identified by ICD-codes to confirm RA diagnosis and presence of disease modifying anti-rheumatic drugs (DMARD) in the medication list.

• Cases were excluded for insufficient data for RA diagnosis, no current or past DMARD therapy and/or non-RA diagnosis of arthritis. Data abstraction was performed utilizing the predesigned data collection sheet for the study. Collected data was verified by a second investigator. Hand images were reviewed utilizing the Simple Erosion Narrowing Score by a musculoskeletal radiologist.

• Descriptive statistics was applied. We used measures of central tendencies and dispersion for continuous variables and frequency distribution for categorical variables. Data was presented as the mean ± standard deviation (SD).

• We compared our predominantly Black RA population to previously published RA data with predominantly White cohorts; Consortium Of Rheumatology Researchers Of North America (CORRONA) to assess differences in CVD and CVD risk profile and features of RA disease severity as well as therapeutic patterns including the use of steroids, DMARDS and biologics.

Conclusions

• This is the first study of CVD in Blacks with Rheumatoid Arthritis (RA) including assessment of disease severity and therapeutic patterns compared to Whites. We observed higher rates of CVD risk factors including obesity, diabetes, hypertension, dyslipidemia, compared to the White cohort of the CORRONA study. Our population had aggressive disease with high rates of sero-positivity, joint narrowing/erosions and elevated inflammatory markers. Our RA Black cohort had nearly double the rate of steroid use (a risk factor for CVD) and less than one third utilization of biologics, which lowers the risk of CVD risk, compared to Whites of the CORRONA study.