

Trends of mortality in Acute Myocardial infarction in patients with Rheumatoid Arthritis in the US

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INTRODUCTION

- Cardiovascular mortality is higher in patients with rheumatoid arthritis (RA) compared to the general population.
- Chronic inflammation plays a principal role in accelerated atherosclerosis.
- With advances in therapy and widespread use of biologics for RA, better disease control is expected.
- This study attempted to map out the trends in mortality of acute myocardial infarction (MI) cases in RA patients.

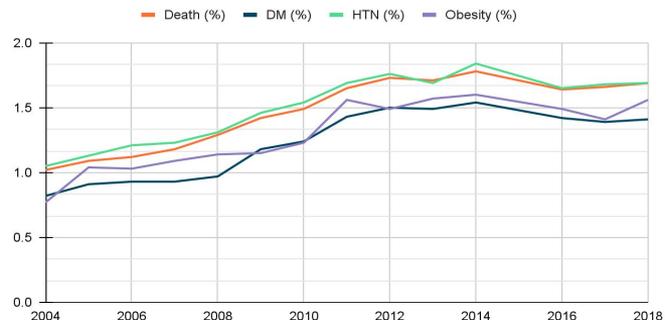
METHODS

- We used the Nationwide Inpatient Sample database (years 2004-2018) and extracted all patients with acute myocardial infarction (MI) using validated International Classification of Disease (ICD) codes.
- Data from 2015 was excluded from the study in light of the transition of the coding system from version 9 to 10.
- Further, we divided the population based on the presence of rheumatoid arthritis and analyzed the trends of mortality and other comorbid conditions.
- Statistical analysis system 9.4 software was used for data analysis.

RESULTS

- 2,792,904 cases with acute MI were identified in the 15 years, out of which 40891 patients had RA.
- The mean age of RA patients with MI was 71.58 ± 0.059 years, with females making 65.41%.
- An overall upward trend in mortality was seen in acute MI cases with RA (p-value of <0.0001), from 0.92% in 2004 to 1.46% in 2018 with a peak of 1.92% in 2012.
- It is also evident that the prevalence of diabetes mellitus, hypertension, and obesity are also uptrending in RA cases with a p-value of <0.0001

Trends in Rheumatoid Arthritis cases in Acute MI



DISCUSSION

- Our study shows that RA patients' mortality in acute MI cases has been uptrending from 2004 to 2012, followed by a steady decline.
- This decline could be attributed to advancements in therapies, especially the widespread use of biological agents, decreasing chronic inflammation and controlling accelerated atherosclerosis.
- The trend in mortality closely follows the increase in the prevalence of hypertension, diabetes mellitus, and obesity.
- More extensive prospective studies need to be undertaken to understand better the causality of increased cardiovascular complications in RA patients.