



Abstract ID: 99 Figure 1

ID: 99 **PREVELNACE, MORBIDTY AND MORTALITY OF INFECTIVE ENDOCARDITIS IN THE MOST DIVERSE AREA OF USA IN NEW YORK CITY**

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10.1136/jim-2016-000120.83

**Background** Infective endocarditis (IE) is a serious illness associated with significant morbidity and mortality. The primary purpose of this study was to evaluate the mortality and morbidity of IE in a community public hospital of the most diverse area in New York.

**Methods** An analysis of 209 patients that were admitted to hospital from 2000 to 2012, found to have IE based on Duke's criteria.

**Results** The incidence rate of IE is trending down since 2000 (figure 1A).

Among our study population, the overall mortality rate of IE was 20.1% (95% CI: 9.84–19.56%), readmission rate within 30 days after discharge was 21.5% (95% CI: 16.22–27.58%) with an average age of 59 years (95% CI: 57.63–60.37%). The most common causative organisms were staphylococcus aureus (43.7%), followed by streptococcus viridians (17%) and Group D enterococcus (14.7%). We divided the patients into two groups; male (n=107) versus female (n=102). And the same aspects were identified and studied in each gender group.

The incidence of IE has a slight female predominance, except two age groups with male significant predominance; 40–49 and 50–59 years. (figure 1-B).

The mortality rate in males was 17% vs 23% in females ( $p=0.09$ ) and Readmission rate within 30 days after discharge from the hospital was 20% in males vs 22% in females ( $p=0.1$ ).

Of the 209 patients, 188 patients were with native hearts and 21 patients had non-native heart valves. Of the 188 native heart valves, 114 had risk factors such as: CABG surgeries, were active drugs users, had pacemakers, valves disease or CHF. Mortality rate in non-native hearts and/or patients with risk factors were 27.7% compared to patients with native heart without risk factors of 8.11% (OR:3,  $P<0.0001$ ).

The causative organism of IE was evaluated in our study and we found that *S. aureus* is the most common cause in males and females among all age groups. The only exception to that is a slightly higher prevalence of *S. viridians* in males between the ages of 30–39 (figure 1-C). Similarly, the prevalence of group D enterococcus appeared higher in females aged 70–79 years. (figure 1-D).

Approximately 71% of males' patient with *S. aureus* IE between ages 50–49 had DM. Also, 80% of female patients with IE between ages 60–69 had DM which could explain the high prevalence of IE with *S. aureus* in this age groups as DM may complicated with skin infections which is mostly Staphylococcus infection that led to IE.

The highest incidences of IE in our study were in Hispanic ethnicity group (38%) follow by white (29%). However, the lowest incidences were observed in South Asia population (5%).

**Conclusion** Despite appropriate prophylaxis and treatment of IE patients, high rates of incidences, morbidity and mortality remained especially in population >50 years. Risk factors for developing IE such as Diabetes Mellitus which might complicated with skin infection and lead to IE, raising the importance of controlling and monitoring risk factors for IE in patients older than 50 years of age.