Analyzing Factors that Impact Potential Mortality of COVID-19 in Persons with Type II Diabetes

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ABSTRACT

- Type II Diabetes and COVID-19 are both epidemics occurring simultaneously in the United States
- Type II Diabetes is a preventable disease
- Researchers are gathering information on how diabetes affects the severity of COVID-19
- Long term effects of COVID-19 are still unknown

OBJECTIVES

- Determine factors that worsen diabetes
- Do social determinants increase likelihood of diabetes and COVID-19?
- Factors in common between diabetes and COVID-19 (environmental, social, economic, etc.)

METHODS

- Literature review explores COVID-19 deaths, with diabetes as the sole comorbidity in Guo et al. (2020).
- Explore the factors that cause and contribute to diabetes:
  - Cohort studies, literature reviews and discussions, review of statistical results
  - Various methods considered when looking at COVID-19 and diabetes, comparing incidence of the two diseases and factors that overlap is critical for drawing conclusions and hypothesis

RESULTS

- ACE Inhibitors do not affect prognosis of COVID-19 (Lopes et al., 2021)
  - Significant because many diabetics use these medications (those with heart disease).
- Kolb and Martin (2017) discuss the environmental and lifestyle factors that influence the increase in Diabetes in the world.
  - Those with genetic risk and beta cell damage are thought to be at higher risk when environmental and lifestyle factors are accounted.
- Sorensen et al. (2017) discusses the affect that noise pollution and environmental factors have on the incidence of diabetes.
  - Exposure to 10-decibel higher level of “road traffic noise” during the prior 5 years in the cohort study of increased risk of diabetes.

TABLE 1

<table>
<thead>
<tr>
<th>Disease</th>
<th>Non-diabetes (n = 38)</th>
<th>Diabetic (n = 24)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Age</td>
<td>60</td>
<td>55</td>
</tr>
<tr>
<td>Height</td>
<td>165</td>
<td>160</td>
</tr>
<tr>
<td>Weight</td>
<td>70</td>
<td>80</td>
</tr>
</tbody>
</table>

- Those older than 60 had worsened symptoms, according to the prior chart symptoms included:
  - Nausea
  - Vomiting
  - Higher mortality (16.5% vs. 0%)
  (Guo, et al. 2020)

REFERENCES


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