Analysis of Zinc and Vitamin C as a Combined SARS-CoV-2 Treatment: A Systematic Review

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**Objectives**
- Assess routes of zinc and vitamin C which are most effective for improving SARS Cov-2-positive patient health prognosis.
- Determine efficacy of zinc and vitamin C in reducing need for ventilation, hospitalization, and mortality rates.

**Introduction**
- SARS-COV-2, causes septic shock, which triggers a cytokine storm causing vasodilation (hypotension), acute respiratory distress syndrome (ARDS), Disseminated intravascular coagulation (DIC), and multiple organ dysfunction.
- The utilization of zinc supplementation was observed in second study to result in reduction of ventilator pneumonia (Shah, GS. et. al. 2012).
- A study demonstrated the efficacy of 6-24g of vitamin C a day diminished mortality caused by SARS-COV-2 (Holford, P. et. al. 2020).

**Methods**
- Clinical trials which implemented vitamin C and Zinc as adjunct treatments for SARS-CAR-2, patients were analyzed.
- Statistical analysis were conducted with data collected from the clinical trials to determine significance.

1. Odds Ratio
2. Paired T-test
3. Forest Plot Assessment graphs

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**Results**

**Figure 1:** Oral Zinc Mortality Rate

**Figure 2:** Oral Zinc and Ventilation Rates

**Figure 3:** Oral Zinc and Hospitalization

**Figure 4:** IV Zinc and Mortality Rate

**Figure 5:** IV Zinc Treatment and Hospitalization

**Figure 6:** IV Vitamin C and Hospitalization

**Figure 7:** IV Vitamin C Mortality Rate

- 58 participants, only 7 (12.1%) hospitalized, 2 (3.4%) died from SARS-CoV-2 complications (Thomas, S et al. 2021).

**Discussion or Summary of Results**
- The results of the findings were not significant p > 0.05.
- However, Zinc and vitamin C treated patients slightly fared better.

**Conclusions**
- More clinical trials are essential to determine the effectiveness of zinc and or vitamin C on SARS CoV-2-positive patient recovery.

**References**