Inflammation And Cytokine Levels - Association With Suicide Attempt History Among Veterans

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This research investigates and compares the longitudinal expression of cytokines (IL-1β, IL-4, IL-6, IFN-γ, and TNF-α) in Veterans with current depression and a history of suicide attempts (MDD/SA) versus Veterans with no psychiatric diagnosis or suicide attempts (HC). The study aims to assess whether inflammatory markers could serve as potential biological indicators for identifying individuals at high risk for suicide among Veterans and explore the feasibility of using blood samples and inflammatory assays for studying inflammation in the context of depression and suicide risk among Veterans. The research involved 71 US Veterans recruited from the JJPVA Medical Center in Bronx, New York, followed longitudinally at 0-, 3-, and 6-month intervals. Blood samples were collected at the initial time point (T0) and 3 months and 6 months for the HC and MDD/SA groups. Two-group comparison t-tests revealed significant IL-6 and IL-1a expression differences between the control and individuals with suicide attempts. Furthermore, individuals with suicide attempts has significantly higher IL-6 levels compared to the control. These findings suggest that Veterans with a history of suicide attempts exhibit distinct cytokine profiles compared to controls, indicating potential avenues for targeted suicide prevention interventions based on biological markers. However, limitations such as attrition, lack of standardization in blood draws, and a small sample of longitudinal data underscore the need for further research to comprehensively elucidate these differences and associations.