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Examining the Relationship Between Adverse Childhood Experience Scores and Quality of Life Scores in Patients Undergoing Radiotherapy for Head and Neck Cancer

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Abstract
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Abstract

Purpose: Adverse childhood experiences (ACEs) have been linked to a multitude of diseases, including cancer. ACEs are potentially traumatic events that occur before 18 years of age and can include, but are not limited to: abuse, neglect, exposure to violence, or having a caregiver who struggles with mental health or substance abuse. While previous, long-standing studies have found an association between elevated ACE scores and cancer risk [1], little is known about the relationship between ACE scores and quality of life changes throughout cancer treatment. Elevated ACE scores have been linked to altered stress responses in adults, and because of this, we hypothesize that patients with higher ACE scores will have a greater decrease in their quality-of-life scores while undergoing radiotherapy for head and neck cancer.

Methodology: This study was conducted on a prospective protocol with IRB approval. Patients with head and neck cancer completed a ten question ACE survey during their clinic visit, prior to beginning radiotherapy. Patients also completed the EORTC Core Quality of Life questionnaire that measures their psycho-social, physical, and social well-being prior to beginning treatment, and then again at the end of treatment, roughly six weeks later. Spearman correlation coefficients and the t-test were used to calculate relationships.

Results: Interim data from 14 patients undergoing treatment for head and neck cancer has been collected. Spearman correlation coefficient test found a moderate relationship between emotional function decline throughout treatment in patients who reported the adverse childhood experience of living with a mentally ill caregiver. Furthermore, patients who reported feeling unloved by their family throughout childhood reported higher rates of physical pain (p-value = 0.019).

Conclusion: This study aims to gather quality of life data from 100 patients. Preliminary data has shown an association between certain ACEs and a decline in emotional functioning as well as increased reported pain that has affected patients' quality of life. Patients with increased numbers of ACEs likely have more trauma, and previous studies have found decreased resiliency and coping ability in patients with traumatic childhoods. Unfortunately, trauma-informed care is still underutilized in medicine. We hope that by understanding the roles that ACEs can have on quality of life throughout and after cancer treatment, we can strategize ways to improve patient experiences and outcomes.

References:

1. Felitti, V.J., et al., Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. Am J Prev

Med, 1998. 14(4): p. 245-58.