Annual Congress on MENTAL HEALTH

July 03, 2023 | Webinar

Differences in telomere length between adolescent females with anorexia nervosa restricting type and Anorexia nervosa binge-purge type

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Physiological and psychological distress may accelerate cellular aging, manifested by shortening of telomere length (TL). The present study focused on TL shortening in anorexia nervosa (AN), an illness combining physiological and psychological distress. For that purpose, we measured TL in 44 female adolescents with AN at admission to inpatient treatment, in a subset of 18 patients also at discharge, and in 22 controls. No differences in TL were found between patients with AN and controls. At admission, patients with AN-binge/purge type (AN-B/P; n=18) showed shorter TL compared to patients with AN-restricting type (AN-R; n=26). No change in TL was found from admission to discharge, despite an improvement in body mass-index standard deviation score (BMI-SDS) following inpatient treatment. Older age was the only parameter assessed to be correlated with greater TL shortening. Several methodological changes have to be undertaken to better understand the putative association of shorter TL with B/P behaviors, including the increasing of the sample, and the assessment of relevant pathological eating disorder (ED) and non-ED psychological correlates in the two AN subtypes.

Biography

Orit Uziel conducted her Ph.D. in molecular biology at the Tel- Aviv University (TAU), Israel. After her post-doctoral fellowship at TAU she established the laboratory for telomeres and telomerase research together with prof. Lahav. During more than two decades she focused around deciphering the molecular role of telomerase and telomeres in hematological malignancies, by using rationalized drugs directed at the inhibition of telomerase. Major studies include: Deciphering the dynamics of telomeres shortening in BRCA1/2 mutation carriers; Exploring whether telomerase inhibition per-se sensitizes cancer cells to cytotoxic drugs; discovering the presence of the hTERT transcript in cancer cells-derived exosomes its subsequent role in the recipient cells; and the like. In her laboratory at the FMRC headed by prof. Raanani she trained many physicians in their basic research projects and graduate students of the Sackler School of Medicine, Tel Aviv University. She has numerous research co-operations in Israel and in Toronto, Canada.