Metabolic syndrome and health-related quality of life among patients with liver transplantation

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Background: The purpose of this study was to determine whether characteristics of metabolic syndrome (MetS) and MetS management behaviors would be significantly associated with health-related quality of life (HRQOL) among patients with liver transplantation.

Methods: Ninety-four patients who underwent liver transplantation were recruited at an outpatient clinic from a university hospital in Seoul between December 2009 and June 2019. MetS was defined according to NCEP-ATP III. MetS management behaviors were measured by using the Evaluation Tool of a Lifestyle Habit for MetS Modification. HRQOL was measured by using the MOS SF-36 II and analyzed by categorizing physical QOL and mental QOL.

Results: The means of physical and mental QOLs were 82.3 and 82.8 scores, respectively. MetS prevalence was 68% and a mean of MetS management behaviors was 97.0. MetS prevalence was not significantly associated with either physical or mental QOLs. However, an increase in abdominal obesity was significantly and negatively associated with physical ($\beta = -0.53$, $P = 0.001$) and mental QOLs ($\beta = -0.41$, $P = 0.005$), respectively. Of the MetS management behaviors, diet control ($\beta = 0.59$, $P = 0.021$) and drinking & smoking control ($\beta = 2.18$, $P < 0.001$) were significantly associated with physical QOL. Physical activity ($\beta = 1.45$, $P = 0.001$), diet control ($\beta = 0.51$, $P = 0.013$), and drinking & smoking control ($\beta = 2.00$, $P < 0.001$) were significantly associated with mental QOL.

Conclusions: MetS may not associate with HRQOL directly but MetS management behaviors may associate with HRQOL among patients with liver transplantation. Therefore, nursing strategies for promoting MetS management behaviors should be enhanced to improve their HRQOL levels in outpatient clinics and community settings.

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