倦怠感は化学療法に関連した認知機能の問題に影響する(Abstract # S6-3)

乳がん女性においては化学療法前から神経認知問題が存在する可能性がある

Neurocognitive problems may be present before chemotherapy in women with breast cancer

化学療法を施行され認知機能の問題を経験する、一般的に"ケモブレイン"と呼ばれる症状を有する女性は治療開始前から神経認知反応の変化を示すとのデータが2012 CTRC-AACRサンアントニオ乳がんシンポジウムで発表された。研究者らは機能的磁気共鳴画像(fMRI)を用いて、術後補助化学療法を施行された女性28人、放射療法を施行された女性37人および健康なコントロール32人の神経認知反応を検査した。治療前および治療1か月後に参加者は、fMRI画像検査中に様々なレベルの認知制御を必要とする言語作業記憶課題を行った。また、倦怠感に関して自己報告を行った。化学療法を施行された女性は、治療前および治療後1か月に有意に高レベルの倦怠感を訴え認知機能検査の正確性が低かった。さらに、倦怠感が強いほど検査の成績が不良でありスタディ期間中に報告される認知機能の問題が多かった。治療前の脳画像は両治療群においてコントロール群よりも課題を施行するのに必要な領域の機能が低下しており、化学療法を待機している女性においてより多く認められた。放射線療法群の成績は他の2群の成績の中間であった。マインドフルネス介入、心理的サポート、認知行動療法および運動療法などの乳がん診断後のストレスを除去する既存の介入を研究者らは推奨している。

Full Text

Women undergoing chemotherapy who experience cognitive problems, commonly referred to as "chemo brain," displayed alterations in neurocognitive responses prior to undergoing treatment, according to data presented at the 2012 CTRC-AACR San Antonio Breast Cancer Symposium.

Bernadine Cimprich, Ph.D., R.N., associate professor emerita at the University of Michigan School of Nursing in Ann Arbor, and colleagues found that pretreatment neurocognitive compromise and fatigue were key contributors to the cognitive effects often attributed to chemotherapy.

"For a long time, women undergoing treatment for breast cancer have reported cognitive problems such as trouble thinking clearly, remembering things, and carrying out jobs and other responsibilities, which we have attributed to chemotherapy or 'chemo brain,'" Cimprich said. "Research shows that these problems do occur in some women during chemotherapy, but we still do not understand what the underlying causes are."

Cimprich and her colleagues reasoned that the mental demand and stress of a breast cancer diagnosis could play a role in these early cognitive problems. They tested neurocognitive responses using functional magnetic resonance imaging (fMRI) on 28 women who received adjuvant chemotherapy, 37 who received radiotherapy and 32 healthy controls. Before treatment and one month after treatment, the participants performed a verbal working memory task with varying levels of demand for cognitive control during fMRI scanning. They also provided self-reports of fatigue.

Women who underwent chemotherapy reported a significantly higher level of fatigue and performed less accurately on the cognitive tests before treatment and one month after treatment. In addition, greater fatigue correlated with poorer test performance and more cognitive problems reported over time.

Brain imaging before treatment showed reduced function in regions needed to perform the task in both patient groups when compared with controls, with more compromise seen in women awaiting chemotherapy. Women who were less successful in recruiting the brain regions needed for the task before treatment were more likely to suffer greater fatigue over time, regardless of treatment group. "Our initial findings showed that the level of worry interfered with patients' ability to do a task," Cimprich said. "The level of worry had a key role in the cognitive problems with these women before treatment, and this worry was related to fatigue."

Scores for cognitive testing from women who underwent radiation treatment fell between those of women who underwent chemotherapy and those of the healthy women.

"Women faced with the decision to undergo chemotherapy should know that cognitive problems, should they occur, may not always stem from chemotherapy," Cimprich said. "Women should not avoid accepting recommendations for lifesaving chemotherapy for fear of 'chemo brain.'"

Cimprich recommended existing interventions to combat stress after a breast cancer diagnosis, including mindfulness intervention, psychological support, cognitive behavior interventions and exercise.

"It might be possible to diminish worry and fatigue and maintain strong brain function during the course of treatment using these interventions," Cimprich said.
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TOPICS