

ONCODAILY MEDICAL JOURNAL

abstract

Oncologists' Perspectives on Ketogenic Diets in Pediatric Brain Cancer: Potential, Challenges, and the Path Forward

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DOI: 10.69690/ODMJ-018-0425-2364



SIOP Asia, 2025, Saudi Arabia



Oncologists' Perspectives on Ketogenic Diets in Pediatric Brain Cancer: Potential, Challenges, and the Path Forward

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Introduction: Brain cancer, particularly in pediatric patients, remains a significant health challenge due to the limitations of traditional therapies, which often harm healthy cells. Ketogenic diets (KDs), characterized by low carbohydrate and high fat intake, have gained attention as potential adjunct therapies. By reducing glucose availability and providing ketones as an alternative energy source, KDs may hinder tumor growth. This study examines the perceptions of oncologists in Saudi Arabia regarding KDs use in pediatric brain cancer patients.

Methodology: Current study is a cross-sectional survey involving 94 oncologists from major Riyadh healthcare facilities exploring their knowledge, safety concerns, feasibility, and perceived efficacy of KDs. Digital surveys collected responses, analyzed through descriptive and chi-square statistical methodology.

Results: Findings revealed that 67% of participants correctly identified KDs composition, though 43% expressed neutral views on its safety. Concerns about malnutrition and side effects were

prevalent, with 53% finding KD adherence challenging for pediatric patients. While 48.9% believed KDs could enhance treatment outcomes alongside standard therapies, others emphasized the need for individualized recommendations based on medical conditions. Oncologists were categorized into perception-positive and perception-negative groups. Perception-positive participants, primarily consultants, displayed a more favorable view of KDs and were often internationally educated. Perception-negative respondents, largely fellows, exhibited greater skepticism and emphasized KDs risks and limitations.

Conclusion: The study highlights a lack of consensus and gaps in oncologists' understanding of KDs potential in pediatric oncology. Collaborative efforts among dietitians, oncologists, and researchers are needed to develop evidence-based guidelines. Further research, including randomized controlled trials, is critical to establish KDs safety and efficacy, paving the way for its integration into cancer care as a complementary treatment strategy.