

Investigation of the effectiveness of nutrition intervention, in the management of malnutrition in colorectal patients receiving chemotherapy

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Background: Malnutrition is prevalent in the colorectal cancer (crc) population and can impact treatment tolerance and outcome. In 2012, a study identified malnutrition prevalence in Western Health (WH) cancer patients at 35%. In the crc cohort, 46% were malnourished however only half had been referred to the dietitian. WH's catchment area is one of the fastest growing population corridors in Australia, encompassing diverse cultural and linguistic backgrounds and a higher incidence of colorectal cancer. Often crc patients have multi-modality, lengthy treatments, including high nutritional risk surgery, chemotherapy and radiotherapy. A RCT demonstrated individualised nutritional intervention during radiotherapy treatment improved nutritional status, quality of life and long-term prognosis in colorectal patients.

This project hypothesized that individualised nutrition intervention of colorectal cancer patients receiving chemotherapy would improve nutritional status and quality of life.

Methods: A prospective randomised controlled trial (RCT) was conducted with crc patients receiving chemotherapy at WH offered to participate. Non-English speaking patients (NESB) were included, using interpreters and translated QOL tools. Patients were randomised to the control or intervention group. Nutritional status (Weight, BMI, PGSGA) and quality of life (EORTC QLQ-CR30 validated multicultural tool for cancer patients) were measured at baseline and 3mths. Control group received 'usual care'. Intervention group received assessment and individualised nutrition education and supplements as indicated. Malnourished patients were reviewed monthly.

Results: 48 patients were recruited with 13% from a NESB. There was a trend towards improved nutritional status in the intervention group however not statistically significant. ($p=0.31$, $p=0.38$). No difference in QOL scores between the two groups was found. In the intervention group increased energy intake occurred ($*p=0.02$) and there was a trend for increased protein & fluid intake ($p=0.79$, $p=0.20$).

*The intervention group significantly increased their dietary energy intake by 9% ($*p=0.02$).*

Conclusion: This study showed trends towards improved nutritional status with individualised nutritional intervention for chemotherapy colorectal cancer patients. The lack of statistical significance is likely due to the smaller than predicted participants and a large withdrawal rate. It is hoped that recruitment in higher numbers would provide adequate power to detect a significant difference between the groups. It did demonstrate that with dietary intervention increased oral intake can be achieved. This study also increased the dietetic profile and awareness of identifying and treating malnutrition in the chemotherapy centre.

The number of non-English speaking patients were too few to perform analysis of these patients as a sub group.

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