Does Malnutrition Contribute To The Cancer Patients Distress

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Background

- In cancer patients, malnutrition and weight loss are significant predictors of mortality. (1, 4)
- It is estimated that 31% to 87% of cancer patients will experience weight loss and malnutrition. (3)
- Malnutrition has been associated with a number of sequelae such as, decreased response and tolerance to treatments, increased risk of complications, increased health care costs, decreased quality of life, and decreased survival. (2, 3, 4, 5)
- Depression and anxiety are common symptoms experienced by patients with cancer. Many patients experience somatic symptoms (e.g., anorexia, weight loss, abdominal distress) not related to psychological problems.
- Depression or anxiety could affect patients appetite.
- Many symptoms related to inadequate nutrition can contribute to distress.
- "Distress is an unpleasant experience of an emotional, psychological, social, or spiritual nature that interferes with people's ability to cope" (6)
- "35% to 45% of all cancer patients experience significant psychological distress at some point over the cancer trajectory" (7)

Objective

The aim of this study is to examine the relationship between malnutrition and psychological distress in patients participating in a cancer nutrition rehabilitation program.

Method

Participants

Hundred twenty one patients were recruited from within the McGill University Health Center from October 2006 to September 2008. Table 1 presents the characteristics of the patients.

Table 1
Characteristics of the Patients

Age	**M (SD) [Range]** 59 ± 12 [22-88]
Gender	**Number of Participants (%)**
Male	70 (48)
Female	51 (42)
Cancer Diagnosis	**# of Participants (%)**
GI	17 (14)
Breast	14 (12)
Head & Neck	12 (10)
Pancreas	10 (8)
Lung	7 (6)
Hepato-biliary	6 (5)
Other	55 (45)

Procedure

All patients enrolled into the Cancer Nutrition Rehabilitation Program completed a battery of measures at initial entry into the program. The Patient Generated-Subjective Global Assessment (PG-SGA) and the Distress Thermometer (DT) were used to assess patient's nutrition status and level of psychological distress respectively. Multiple linear regressions were performed to evaluate the relationship between DT and the PG-SGA.

Measures

The PG-SGA is a validated questionnaire designed for assessing the nutritional status in cancer patients and consists of two parts:

Part 1 Patient reported nutrition related complaints include:
- Current weight and change in weight over the previous 2 weeks to 6 months
- Change in food intake compared with usual intake
- Presence of symptoms potentially affecting food intake
- Functional capacity

Part 2 (completed by the nutritionist) includes:
- Assessment of metabolic demand
- Other health conditions affecting nutritional requirements
- Physical examination findings

A categorical score representing a patient's nutritional status is based on an objective numerical and subjective global assessment scores. A higher numerical score indicates that the patient is at greater risk of malnutrition. Categories of nutritional status include SGA-A "well-nourished", SGA-B "moderately malnourished or suspected of malnutrition", and SGA-C "severely malnourished".

In this study, we used only the first part of the questionnaire (patient reported nutritional score) as well as the subjective global assessment scores.

The DT is a self-report measure using an 11-point scale from 0 (no distress) to 10 (extreme distress). On the same page is an associated problem checklist, which asks whether the indicated level of distress is related to practical, family, emotional, spiritual or religious, or physical concerns.

Results

Figure 1:
Correlation of distress thermometer score by patient reported nutritional score adjusted for sex

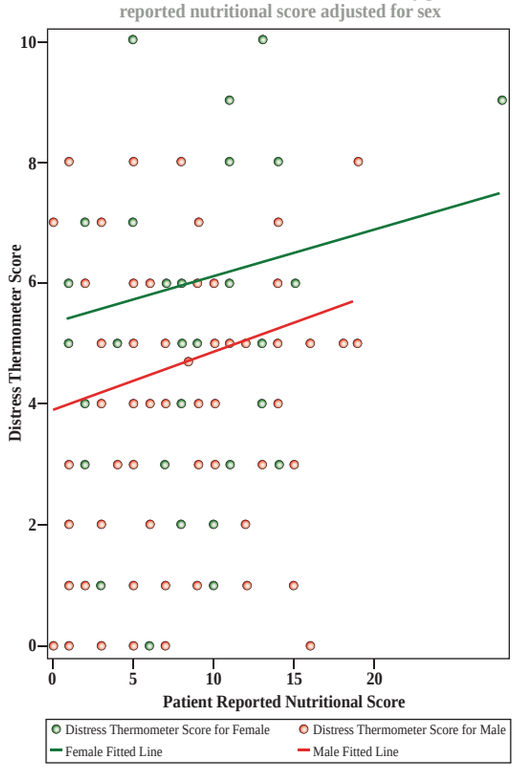
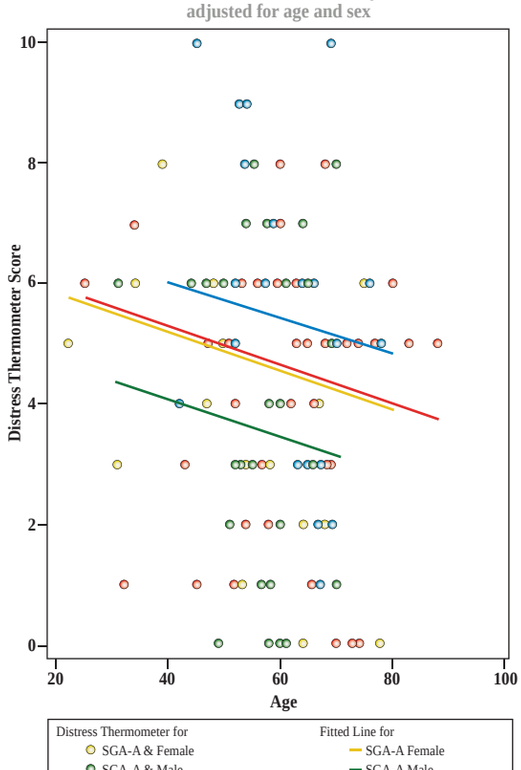


Figure 1 presents a significant increase in distress as the patient reported nutrition related complaints increase. (There was a 0.9 unit increase in distress for a 10 unit increase in patient reported nutritional score [95%CI(0.09,1.74)])

Male patients experienced less distress then female for the same reported nutrition related complaints score. (There was 0.9 unit decrease in distress in male compare to female [95%CI(-1.82,-0.12)])

A trending decrease in distress was observed with an increase in age (p=0.1).

Figure 2:
Correlation of distress thermometer score by nutritional status adjusted for age and sex



As shown in Figure 2, the "well nourished patients" reported less distress as compared with the "moderately malnourished or suspected of malnutrition" and "severely malnourished" groups (p=0.03).

Male patients experienced less distress then female for the same nutritional status. (There was 0.9 unit decrease in distress in male compare to female [95%CI(-1.73,-0.03)])

A trending 0.4 unit decrease in distress per 10 year increase in age was observed (p=0.08).

Discussion And Conclusion

- In our population, the patient reported nutrition related complaints was associated with higher distress levels.
- The "well nourished" group reported significantly less distress then the "moderately malnourished or suspected malnutrition" and the "severely malnourished" group.
- There was a trend of decrease distress with increase in age.
- Males tended to have lower distress level compare to female for the same magnitude of nutrition related complaints and nutritional status.
- Evaluation of the nutrition status should be included in the evaluation of distress experienced by these patients.

Limitations

- The complexity of its aetiology requires caution in drawing a conclusion with regard to cause and effect.
- Specific population to generalize to all cancer patients.
- Other considerations such as cancer diagnosis and stage, pre/during/ post cancer treatment, marital status, social economic status were not considered in the model.

References

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