Taste alterations in patients with breast cancer: Study protocol

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Background and Purpose

Breast cancer (BC) is the most common cancer occurring in 2.26 million people worldwide in 2020 [1]. Depending on the stage of BC, treatment strategies include different chemotherapeutic agents (CT), radiation, surgery, or hormonal therapies [2]. CT is often accompanied by side effects, such as nausea, vomiting, diarrhea, xerostomia, dysphagia, and taste alterations (TAs) [3]. The incidence of TAs in BC patients is highly variable, depending mostly on the chemotherapeutic agent and the method of TAs evaluation. TAs often led to dietary modifications in BC patients [4], indeed, both dysgeusia and the availability of food are the main determinants of food choices during chemotherapy. A worsening of the nutritional status (increased body weight, BMI, and waist circumference) and an increase in the inflammatory profile of the diet were reported in women undergoing chemotherapy with potential adverse effects on survival and disease-free period.

The aims of the present observational, prospective study are to evaluate and characterize TAs in BC patients undergoing chemotherapy, by using both objective and subjective methods.

Design/methodology/approach

We will enroll patients with a newly diagnosed BC who are eligible to chemotherapy.

Researchers will collect demographic and clinical data at enrolment. Participants, after having signed the informed consent, will be submitted to the following:

-measurement of height, weight, waist circumference (both at the beginning and at the end of the chemotherapy).

-Food frequency questionnaire (FFQ) (both at the beginning and at the end of the chemotherapy).

-Questionnaire for assessing TAs (CITAs) [13] in the Italian version (at the end of the chemotherapy).

Patients with impaired answers to the CITAs questionnaire will be submitted to the taste strip test (objective method) to confirm abnormalities and characterize TAs.

The following Table summarizes the assessments at the first visit and at the planned follow-up visits.

Assessments	1st visit	Follow-up visit
Inclusion/exclusion criteria	X	
Informed consent	X	
Demographic and anamnestic data	X	
Cancer treatments	X	X
Anthropometry	X	X
Taste alteration questionnaire (CiTAs)		X
Taste strips		X (if abnormal answers to CITAs)
Food Frequency Questionnaire (FFQ)	X	X

Expected results

We expect to improve our knowledge on:

1. The real incidence of TAs in breast cancer patients undergoing chemotherapy.
2. Methods of TAs evaluation.
3. Which tastes are more compromised during chemotherapy.
4. The association between the presence of TAs and demographic/anamnestic data, anthropometric/nutritional data, chemotherapeutic treatments.
5. Any changes in food choices of patients with and without TAs during chemotherapy.

Conclusions

TAs are an unresolved issue regarding breast cancer patients undergoing chemotherapy. Our research would investigate the incidence and the impact on nutritional status to improve prognosis and quality of life. This can be achieved with a multidisciplinary approach, involving expert in medicine and gastronomic sciences.

References

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