Prospective assessment of chemotherapy-induced neurotoxicity in breast cancer (HOR 02) and questionnaire survey of physicians’ perspectives


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Background

- Overlap of drug-induced peripheral neurotoxicity (DIPN) and CIPN currently exists during breast cancer chemotherapy.
- There is no standardized approach to the assessment of CIPN.
- Physicians tend to underestimate the incidence of CIPN.
- However, current evidence suggests that self-reported assessments are under reported incidence of CIPN.

To overcome this limitation, a patient-based questionnaire, Patient Neurotoxicity Questionnaire (PNQ) was developed. The PNQ was developed based on a review of the literature, with input from another oncologists, neurological and linguistic experts. The PNQ is an instrument designed to assess CIPN with CRIC and HRQOL.

PNQ includes subjective symptoms (e.g. tingling, pain and numbness).

CIPN and HRQOL Instruments

- PNQ (Patient Neurotoxicity Questionnaire)
- NCI CTC (National Cancer Institute Common Toxicity Criteria)
- FACT/G-Taxane (Functional Assessment of Cancer Therapy/Taxane)

Purpose

- To assess the reliability and sensitivity of PNQ in advanced or metastatic breast cancer treated by weekly administration of paclitaxel (HOR 02).

Part I

- To evaluate the reliability and sensitivity of PNQ in advanced or metastatic breast cancer treated by weekly administration of paclitaxel (HOR 02).

Part II

- To assess the reliability and sensitivity of PNQ in advanced or metastatic breast cancer treated by weekly administration of paclitaxel (HOR 02).

Change of sensory disturbance

PNQ vs NCI CTC

- PNQ is more sensitive than NCI CTC.

Change of motor disturbance

PNQ vs NCI CTC

- PNQ is more sensitive than NCI CTC.

Correlation matrix of five instruments

- PNQ vs FACT/G-Taxane

Responder’s Characteristics

- Age, sex, menopausal status, past history, current smoking, past history of diabetes mellitus, current or past history of alcohol consumption, and current or past history of hypertension were analyzed.

Results (HOR 02)

- Compliance: average response rate was 96.6%
- Sensitivity: PNQ scores correlated with sensory FACT/G-Taxane scores (r=0.82), and NCI CTC scores (r=0.84). NCI CTC scores mostly double between 3 and 4, while PNQ scores were stable.

Conclusions

- Physicians tended to underestimate CIPN, and PNQ was a more reliable and valid instrument to assess CIPN with high acceptability in physicians.

What are the conclusive symptom for diagnosis of CIPN?

- Tingling, weakness, numbness, pain, and sensory CIPN.

Physicians’ Treatment Policy by CIPN Symptom

- Reduce Delay Stop

- Sensory

- Motor

- Pain

- Impaired ability to dress

- Impaired ability to eat

- Constipation

- Nausea

- Diarrhea

- Patient’s view of PNQ

- Sensory

- Motor

- Pain

- Impaired ability to dress

- Impaired ability to eat

- Constipation

- Nausea

- Diarrhea

- Weight

- Height

- BMI

Results (Questionnaire survey)

- Physicians tend to underestimate CIPN, and PNQ was a more reliable and valid instrument to assess CIPN with high acceptability in physicians.

Conclusion