

POSTER SESSION 8: Experimental therapies – clinical

P8.1

The effect of reflexology on quality of life in breast cancer patients

Shadan Pedramrazi, Masoomeh Jarban

Tehran University of Medical Sciences, Tehran, Iran

Background and Aim: Breast cancer is one of the most prevalent cancers among women. Physical and mental symptoms of cancer affect the quality of life in patients. Use of complementary therapies for patients infected by pain and emotional distress arising out of cancer may result in relaxation in breast cancer. One of the complementary therapies is reflexology. This paper has been provided with the objective of determining the effect of reflexology on quality of life in breast cancer patients under chemotherapy in the breast disease center of University of Tehran in 2012.

Material and method: This study is a randomized clinical trial which has been applied on 60 patients suffering from breast cancer. The patients were selected randomly in three groups, test, control and placebo. In the test group, reflexology was implemented for 3 weeks and each session lasted half an hour. In the placebo group, only relaxation techniques were implemented for 3 weeks, each session lasted 20-30 min. The control group received the routine therapies of the breast cancer center.

Result: Data were collected by standard questionnaires of EORTC QLQ-C30.V.3 and EORTC QLQ-BR23.V.3. The questionnaires were filled before intervention and two weeks after applying the study. There was no significant difference in demographic characteristics or quality of life score of the three groups before intervention. Total score of quality of life was higher in the interventional group compared to the placebo group before and two weeks after intervention ($p < 0.001$). Results also indicated a significant difference in total score of quality of life between the three test, placebo and control groups after intervention ($p < 0.001$). A considerable improvement was noticed in the different aspects of quality of life in the test group compared to the two other placebo and control groups.

Conclusion: Using reflexology in patients suffering from breast cancer may improve the quality of life, as an effective method and can be recommended to breast cancer patients.

Keywords: Breast Cancer, Reflexology, Quality of Life

P8.3

Antitumor activity of RET inhibitor vandetanib with mTOR inhibitor everolimus in patients with Non-small cell Lung Cancer with RET fusion.

Vivek Subbiah

UT MD Anderson Cancer Center, Houston, TX, United States

Background: RET fusion kinases (RET+) occur in 1-2% of NSCLCs and are oncogenic drivers. Tumors eventually become refractory to monotherapy. We evaluated the activity of V in combination with the mTOR inhibitor everolimus (E) in RET+ cancer cells and NSCLC patients in a phase I study.

Methods: We performed cell viability assays and analyzed protein phosphorylation with western blot in CCDC6-RET fusion+ LC-2/ad (NSCLC) and TPC1 (papillary thyroid cancer) cells treated with vehicle, V, E, or V + E. We evaluated the activity of V + E in NSCLC pts in a phase Ib study (NCT01582191). RET fusions were detected by FISH and/or comprehensive genomic panel (CGP) in tumor tissue.

Results: V suppressed RET and MEK activation, but not mTOR signaling. E suppressed mTOR but had no effect on impact on RET and MEK activation. V + E blocked RET, MEK and mTOR signaling and had the greatest inhibitory effect on cancer cell proliferation. To date, 19 stage IV NSCLC patients have been treated. Median age was 59 years and 8 patients (42%) were males. The combination was well-tolerated: G3-4 toxicities included diarrhea (21%), thrombocytopenia (16%). Thirteen tumors (93%) were RET+, 8 were assessed by CGP only (CGP+/FISH N/A), 5 were assessed by CGP + FISH. Among the tumors assessed by both tests, 3 were FISH+/CGP-, 2 were CGP+/FISH+. Concordance rate between the two tests was 40%. The ORR in 13 RET+ patients was 54% (7 PR). RET+ by CGP was associated with response: ORR was 75% (6 PR) in CGP+/FISH N/A patients (n=8), and 50% (1 PR) in CGP+/FISH+ patients (n=2). No responses were seen in RET+ tumors by FISH only (0/3=0%). The combination was active in RET+ NSCLC brain metastases, nivolumab progressor and cabozantinib progressor. The median PFS of 13 RET+ patients was 4.4 months (95% CI 3.4, NR); the median PFS of RET CGP+ patients (n=10) was 8 months (95% CI 0.1, 1.1).

Conclusions: V and E combination is superior to single agent in abrogating cell division and RET, MEK and mTOR activation in RET+ cancer cells. The combination of V (300 mg) and E (10 mg) was well-tolerated and demonstrated significant antitumor activity in 10 patients with RET rearranged NSCLC by CGP with an ORR of 70% and a median PFS of 8 months, including in patients with CNS and cabozantinib-refractory disease.