INTRODUCTION

Intravenous (IV) paclitaxel is an approved treatment for breast cancer. Oral administration of chemotherapy is preferable to IV form with regard to minimized IV access, reduced allergic reactions to cremaphor, steroid pre-medications, hospital stay, and relevant cost. However, paclitaxel has poor oral bioavailability due to active excretion by P-glycoprotein (Pgp) on intestinal epithelial cells. Oraxol (Athenex, USA) is a combination of oral paclitaxel and HM30181, a novel oral non-absorbed specific inhibitor of intestinal Pgp. We report the pharmacokinetic (PK) results and clinical response of Oraxol in metastatic breast cancer patients.

MATERIALS AND METHODS

We conducted a multicenter, single-arm, open-label study recruiting breast cancer patients from 6 medical centers in Taiwan. HM30181 15mg plus oral paclitaxel 205mg/m² (Oraxol) were administered orally daily for 3 consecutive days and weekly for up to 16 weeks. PK blood samples were collected in the first and fourth week of Oraxol treatment at the designated timepoints.

RESULTS

Twenty-four patients were recruited into this study with evaluable tumor response. Eleven patients (45.8%) achieved partial responses and 10 patients (41.7%) had stable disease. Twenty-one patients remained progression-free after median 16-week follow-up (CBR= 95.8%). There were 7 drug-related severe adverse events (grade ≥3 neutropenia) occurred in 3 patients. PK samples from 24 subjects demonstrated similar plasma concentrations (AUC) to IV paclitaxel.

CONCLUSION

1. Plasma paclitaxel exposure (AUC) of oral paclitaxel achieved is similar to that reported for weekly IV Paclitaxel
2. The tumor response rate (PR= 45.8%, SD= 41.7%) of Oraxol in treatment of breast cancer patients who failed previous chemotherapies is very encouraging
3. The drug toxicity profile of Oraxol appears tolerable
4. Oraxol appears effective and safe in the treatment of advanced breast cancer patients

ClinicalTrials.gov Identifier: NCT03165955

Clinical Trials.gov Identifier: NCT03165955