Background: Except some life threatening cases, combination of endocrine therapy and CDK4/6 inhibitors is becoming the standard first line treatment for women with hormone receptor (HR) positive/HER2 negative advanced and metastatic breast cancer (MBC). However cost-effectiveness analyses are lacking concerning this therapy. As chemotherapy also targets cell cycle we wondered how sequential combination of chemotherapy and maintenance endocrine therapy could be effective as first line treatment for naïve HR+/Her2- MBC.

Methods: We retrospectively collected from our institutional database (“Institut Paoli-Calmettes”, Marseille, France) cases with naïve HR+/HER2- MBC. We selected patients treated with chemotherapy plus maintenance endocrine therapy as first line treatment between January 2000 and December 2015. Progression-free survival (PFS) and Overall Survival (OS) were analyzed using the Kaplan-Meier’s method. We also conducted univariate (UV) and multivariate analyzes including menopausal status, visceral disease, pathological subtype, and progesterone receptor expression assessed by immunohistochemistry.

Results: A total of 183 female patients were included with a median age at diagnosis of 56.9 years. Most of them were postmenopausal (n = 114, 65.9%) and 108 (59.7%) had visceral metastases. Anthracyclines-Taxanes combinations were used for 162 patients (88.5%). Median number of chemotherapy cycles was 6. Endocrine therapy was aromatase inhibitors and tamoxifen for 120 (67.8%) and 56 (31.6%) cases, respectively. Median PFS was 33 months [95CI = 25-38] and median OS was 79 months [95CI = 63-101]. In UV analysis pre-menopausal status (HR = 0.58), non ductal non lobular subtype (HR = 0.47), and absence of visceral disease (HR = 0.51) were correlated to better OS. All these features remained significant in multivariate analysis. We observed no death related to treatment.

Conclusions: Following these results, and with the issues of cost-effectiveness related to newly approved therapies, first-line chemotherapy plus maintenance endocrine therapy may be considered for untreated HR+/HER2- MBC.

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