Background and importance

Treatment goals for advanced or metastatic breast cancer include not only delaying progression of the disease and extending survival, but also maintaining or improving quality of patient life. New targeted therapies, like cyclin-dependent kinase (CDK)4/6-inhibitors, have improved patients' outcomes with hormonal receptor (HR)-positive, HER-negative metastatic breast cancer compared with conventional single-agent endocrine therapy. They contribute to achieve clinical benefits but at the same time they are the cause of complex and potentially severe adverse events that require a good clinical management of toxicities.

Aim and objectives

Assess the safety of CDK4/6-inhibitors analyzing the relevant Adverse Drug Reactions (ADRs) and reviewing the clinical management of toxicities.

Material and methods

Retrospective and observational study in a second level hospital. We have assessed the safety of the three CDK4/6-inhibitors (ribociclib, palbociclib and abemaciclib) reviewing medical and pharmaceutical records of all patients that were attended at the pharmacy department from January to March 2020. Collected data: age, ECOG, cancer stage, metastatic location, kind of CDK4/6-inhibitors in combination with endocrine therapy, adverse drug reaction (ADR), grade, clinical management: dose reductions, temporary interruptions and permanent discontinuations.

Results

58 patients were included, median age 55 years (75-39). 100% with disease stage IV and the main metastatic location was bone (87%).

- 67% (39) receiving ribociclib.
- 29% (17) receiving palbociclib.
- 4% (2) receiving abemaciclib.

ECOG at the beginning: 0 in 55% (32); 1 in 28% (16); and 2 in 10% (6).

Average of cycles received: 15 (1-36).

38 (66%) patients suffered severe ADRs (grade 3-4), approximately 3 severe ADRs per patient.

Neutropenia was the most common ADR grade 3/4 (85%) related to CDK4/6-inhibitor, highest with ribociclib than other CDK4/6-inhibitor; followed by gastrointestinal disorders (5%).

19 patients also needed supportive treatments

Management of severe ADR (n=38)

- Permanent discontinuations of treatment: 4%
- Temporary interruptions of treatment: 37%
- Dose reductions: 15%

Conclusion and relevance

In spite of the manageable safety profile of CDK4/6-inhibitor in clinical practice, the frequency of severe ADRs associated to these treatments makes necessary a consistent close monitoring side effects and toxicity due to inter-patient variability, and a practical management strategies to find the optimal therapy for each patient.