CARDIOTOXICITY IN PATIENTS TREATED WITH PARP-INHIBITORS

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BACKGROUND AND METHODS

PARP-inhibitors target pathogenic BRCA mutations and homologous recombination deficiency, representing a novel therapeutic approach in patients with this specific alteration and offering longer survival. However, their use in clinical practice has revealed a number of important cardiovascular side effects which can decrease patients' quality of life. This has been little researched, and the information we have is scarce. We conducted an observational study selecting patients treated with PARP-inhibitors between January 2018 and February 2021 in our institution. The aim of this study was to assess the incidence of cardiovascular events in patients treated with PARP-inhibitors.

RESULTS

A total of 44 patients were analyzed. **Cardiovascular events were as follows:**

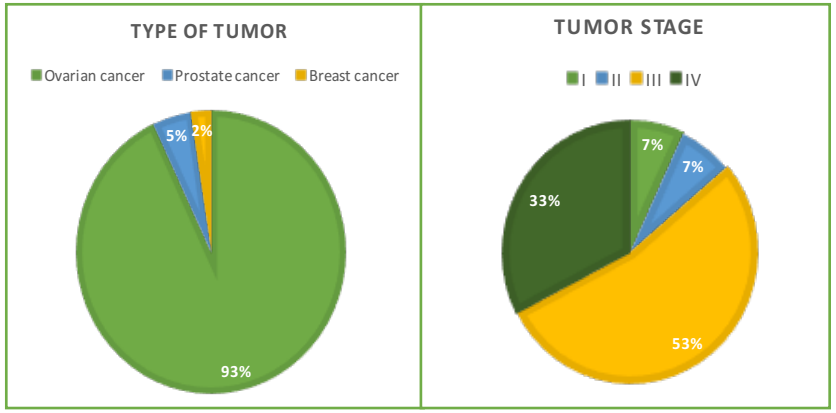
- The most frequent events were hypertension (20.5%) and palpitations (18.6%), most of them requiring cardiologic assessment and treatment with beta-blockers (16.3%) or antihypertensive drugs.
- Approximately, 9.3% of the patients presented an ECG alteration and only 4.6% echocardiographic abnormalities.
- Two patients required hospital admission (acute coronary síndrome and pulmonary embolism). No patient had to stop treatment due to cardiotoxicity and there were no deaths related to cardiological events.
- 25% of the patients were referred to the cardiologist in order to optimize treatment and continued periodic reviews.

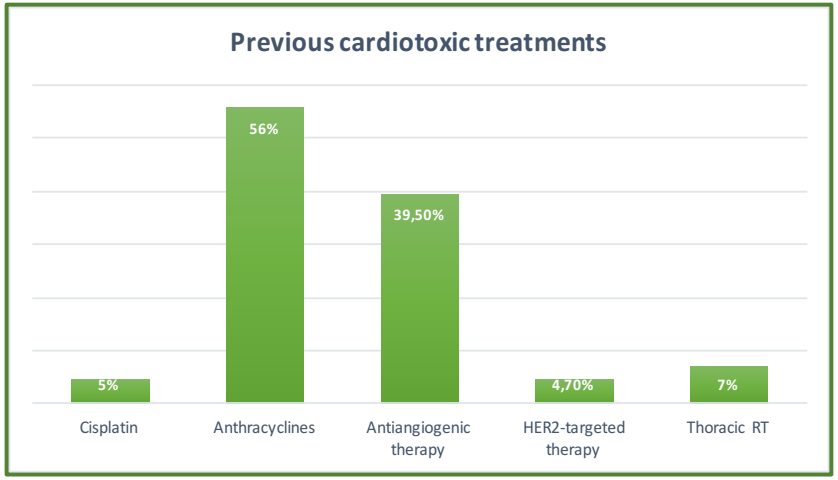
CONCLUSIONS

Almost half of the patients in our study experienced some kind of cardiac event. Prospective studies with cardiovascular comprehensive follow-up protocols are needed. Due to the increased use of these drugs, it's important to highlight the role of the cardiologist in order to optimize treatment, improve patients' symptoms and carry out a multidisciplinary approach.

Table 1. Clinical characteristics

Sex	Males: 4.7% // Females: 95.3%
Median age (years)	55.0 (39.0-76.0)
History of hypertension	11.6%
History of diabetes	7.0%
History of hypercholesterolemia	16.3%
Smoking habit	Non-smoker : 46.5% // Smoker: 14.0% // Former smoker: 39.5%
History of coronary syndrome	4.7%
History of congestive heart failure	0.0%
History of valvular disease	2.3%
History of peripheral arterial disease	0.0%
History of arrhythmia	7.0%
Under anticoagulant treatment	9.3%
Under antiplatelet treatment	4.7%
Familiar history of heart disease	4.7%
PARP-inhibitor treatment received	Olaparib: 46.5% Niraparib: 53.5%
Median duration of treatment (months)	10.0 (1.0 - 53.0)





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