CARDIOVASCULAR TOXICITY INDUCED BY TARGETED AGENTS

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Background

Cardiovascular (CV) toxicity is a potential complication of various anticancer therapies. Although targeted therapies are considered less toxic than classic chemotherapy agents, serious CV complications have been described and longer follow-up is needed to determine the profile and outcomes of related cardiac side-effects.

Purpose

- To describe the CV toxicity induced by targeted agents.

Material and methods

Retrospective observational study carried out at a tertiary care hospital

- Inclusion criteria: patients who started treatment with targeted therapy associated with cardiovascular toxicity between March and August 2016.
- Follow-up: from the beginning of treatment until January 2017.

Information collected from electronic medical records (Millenium® and Farmis-Oncofarm ®):

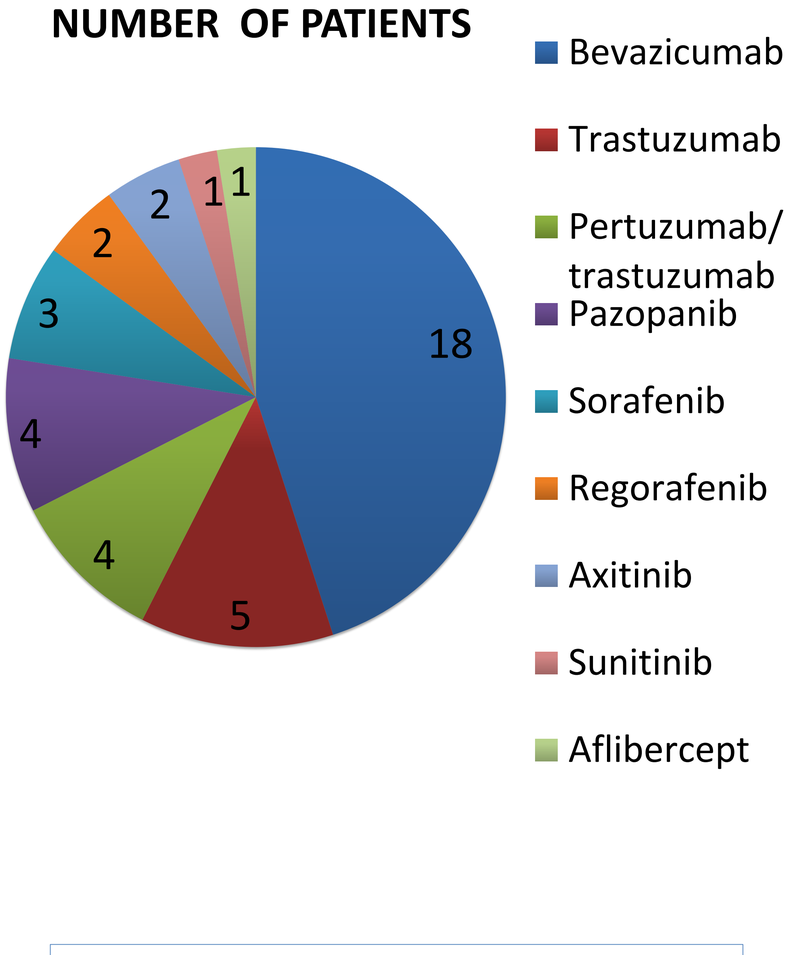
- Demographic and clinical data.
- Previous diagnosis of CV disease and CV risk factors.
- Initiated targeted agent.
- Treatment cycle and type of presented CV adverse event (CVAE): hypertension (HTA), thromboembolic event (TEV), left ventricular ejection fraction reduction (LVEFR), edema.
- Classification grade of the CVAE according to the CTCAE (Common Terminology Criteria for Adverse Events) v 4.03 of NCBI.
- CV treatment adjustment.
- Temporary or definitive discontinuation of targeted agent due to CVAE.

- Analysis of data: descriptive statistics

Results

40 patients included
(65% female; mean age ± SD = 59,9 ±11,9 years

13 patients (32,5%) presented CVAE:



In January 2017, 18 patients were still on treatment

Drug involved	Treatment cycle	CVAE (grade)	Previous diagnosis of CV disease	CV risk factor	CV treatment adjustment	Targeted agent discontinuation
Bevacizumab	1	HTA (g2)	HTA	X	X	
Bevacizumab	2	Edema (g1)				
Bevacizumab	2	HTA (g3)		X	X	Temporary
Bevacizumab	12	HTA (g2)		X	X	
Bevacizumab	2	HTA (g2) TEV (g2)			X	Definitive
Trastuzumab/ pertuzumab	3	LVEFR (g3)		X		Temporary
Sorafenib	7	HTA (g3)	HTA		X	
Regorafenib	5	HTA (g3)	HTA	X	X	
Trastuzumab	14	Edema (g1-g2)				
Pazopanib	1	HTA (g1)	HTA	X		
Pazopanib	1	HTA (g2)		X	X	
Axitinib	3	HTA (g2)	HTA		X	
Axitinib	3	TEV (g4)	HTA	X	X	Definitive*

* This patient presented a severe stroke in the third cycle of axitinib

Conclusion

- The incidence and type of CVAE seem to be similar to previous published data and only in one case the effect was life-threatening. Most of the effects were easily managed and toxicity was reversible.

References

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