International Journal of Cardiology 288 (2019) 130–131

Contents lists available at ScienceDirect

International Journal of Cardiology

journal homepage: www.elsevier.com/locate/ijcard

Editorial

How Cardio-Oncology is called to prove its maturity☆

Giacomo Tini *, Paolo Spallarossa

Clinic of Cardiovascular Diseases, IRCCS San Martino Policlinic Hospital, University of Genova, Italy

ARTICLE INFO

Article history:
Received 24 February 2019
Received in revised form 16 March 2019
Accepted 21 March 2019
Available online 22 March 2019

During the first years of its life, Cardio-Oncology, born 'only' to detect and treat events of cardiotoxicity, experienced a significant change of its own nature. Cardio-oncologists are nowadays called to face multiple, different and complex issues: to evaluate the cardiovascular (CV) profile of a cancer patient prior starting anticancer treatments; to estimate the risk of cardiotoxicity; how to adequately manage this eventuality, in some cases even without halting the causative therapy; whether to suggest a cardiologic follow up at the end of the treatment [1]. Moreover, Cardio-Oncology does not face anymore only 'classic' chemotherapies and 'classic' cardiotoxicity (i.e., anthracyclines), but has to deal with a growing number of CV adverse events due to a likewise increasing number of oncologic therapies [2].

Many efforts have been done, mostly in defining Cardio-Oncology [3] and in translating these new 'concepts' in clinical practice [4,5]. However, the attention and awareness received by Cardio-Oncology have ultimately resulted in a great amount of opinion papers, and in few original, research studies. Furthermore, shared and inclusive cardio-oncologic guidelines are missing.

The paper by Totzeck et al., published in this issue of the *Journal* [6], opens up a door to a further step in the growth of Cardio-Oncology. In their review, Totzeck and colleagues provide a brief yet exhausting revision of the spectrum of CV toxicity due to anticancer treatments, and, most importantly, offer a glimpse of how a Cardio-Oncology Centre works *in practice*. The Authors describe which patients are referred to their Centre, how the clinical evaluation is structured, and suggest possible algorithms for the management of three subsets of oncologic patients (breast cancer patients, subjects treated with immune check point inhibitors and those receiving targeted therapies for melanoma).

Some limitations of this aspect of the work should be acknowledged. The organization of the Authors' centre is presented in brief. Algorithms for management of i.e., patients receiving anthracyclines and trastuzumab are mostly extrapolated from already existing proposals [7]. Moreover, other practical elements deserve a discussion. For instance, all patients treated for breast cancer with anthracyclines and HER-2 inhibitors are evaluated, but what about patients receiving anthracyclines not in combination with trastuzumab or pertuzumab? All myeloma patients are evaluated at baseline as well, while lymphoma or leukaemia patients are not cited – this may depend on various reason, including the decision of the referring haematologist, but is rather questionable. All patients receive blood testing for troponin at first evaluation. For what concerns breast cancer patients, however, the same Authors expose how this approach is poorly integrated in clinical practice. On the contrary, for immune check point inhibitors, there has been a rush at using troponin based screening, even if this model has been questioned [8].

In our opinion, these are not flaws of the elegant review by Totzeck et al., but rather starting points for the *present* Cardio-Oncology to finally become mature. Demonstrating maturity not only means to acknowledge an issue, but most importantly, to face it.

Sharing experiences is of course crucial to grow up. Nevertheless, an important point should be considered. Cardio-Oncology centres have mostly born on a voluntary basis. The organization of each centre depends on various factors, such as, available resources or type of malignancies mainly seen by the oncologic units. This means that at least in this very moment it's not possible to export a single model of how a cardio-oncologic clinic should be structured and work. So, what is important to share beyond volume of patients and algorithms used? We believe the answer is: the results of definite practical approaches. The cardio-oncologic community cannot just wait for comprehensive guidelines. Neither it should keep on passively borrowing concepts from fields outside oncology, whether one is considering heart failure or arterial hypertension. Cardio-Oncology strongly needs original data.

To grow up and finally be an adult, Cardio-Oncology has a compelling necessity for dialogue and confrontation. A dialogue not only between oncologists and cardiologists, not only between cardio-oncologists and cardiologists, but, most of all, between cardio-oncologists and cardio-oncologists.

References

[1] P. Spallarossa, M. Sarocchi, What the oncologist needs to know: how to ask for a cardiology consultation, in: C. Lestuzzi, S. Oliva, F. Ferraù (Eds.), Manual of Cardio-

☆ The authors report no relationships that could be construed as a conflict of interest.
DOI of original article: https://doi.org/10.1016/j.ijcard.2019.01.038.

* Corresponding author at: Clinic of Cardiovascular Diseases, San Martino Policlinic Hospital, Largo Rosanna Benzi, 10, 16132 Genova, Italy.
E-mail address: giacomo.comotini@gmail.com (G. Tini).

https://doi.org/10.1016/j.ijcard.2019.03.042
0167-5273/

oncology: Cardiovascular Care in the Cancer Patient, Springer International Publishing, Cham 2017, pp. 443–450.
[2] J.J. Moslehi, Cardiovascular toxic effects of targeted cancer therapies, N. Engl. J. Med. 375 (2016) 1457–1467.
[3] D.J. Lenihan, G. Hartlage, J. DeCara, et al., Cardio-oncology training: a proposal from the international cardioncology society and Canadian cardiac oncology network for a new multidisciplinary specialty, J. Card. Fail. 22 (2016) 465–471.
[4] J. Cautela, N. Lalevée, C. Ammar, et al., Management and research in cancer treatment-related cardiovascular toxicity: challenges and perspectives, Int. J. Cardiol. 224 (2016) 366–375.
[5] J.L. Zamorano, P. Lancellotti, D. Rodriguez Muñoz, et al., ESC position paper on cancer treatments and cardiovascular toxicity developed under the auspices of the ESC Committee for Practice Guidelines: the task force for cancer treatments and cardiovascular toxicity of the European Society of Cardiology (ESC), Eur. Heart J. 37 (2016) (2016) 2768–2801.
[6] M. Totzeck, M. Schuler, M. Stuschke, G. Heusch, T. Rassaf, Cardio-oncology - strategies for management of cancer-therapy related cardiovascular disease, Int. J. Cardiol. 280 (2019) 163–175.
[7] J.R. Mackey, M. Clemons, M.A. Côté, et al., Cardiac management during adjuvant trastuzumab therapy: recommendations of the Canadian Trastuzumab working group, Curr. Oncol. 15 (2008) 24–35.
[8] M. Sarocchi, F. Grossi, E. Arboscello, et al., Serial troponin for early detection of nivolumab cardiotoxicity in advanced non-small cell lung cancer patients, Oncologist 23 (2018) 936–942.