European Review for Medical and Pharmacological Sciences 2021; 25: 4188-4189

Comment on "Locally advanced breast implant-associated anaplastic large-cell lymphoma: a combined medical-surgical approach"

E. CIGNA[1], A. BOLLETTA[1], L. DOMENICI[2], L. LOSCO[1]

[1]Department of Translational Research and New Technologies in Medicine and Surgery University of Pisa, Italy
[2]2nd Division of Obstetrics and Gynecology, AOUP, University of Pisa, Pisa, Italy

We read with great interest the article from Caputo et al[1] entitled "Locally Advanced Breast Implant-Associated Anaplastic Large-Cell Lymphoma: a combined medical-surgical approach".

The case that the authors had to handle was very tough, and the authors' approach caught our attention. Nowadays, the standardization of care is a hot topic in medicine, especially dealing with a rare and recently identified disease[2]. However, a tailor-made multidisciplinary approach is paramount; this concept is not new to plastic reconstructive surgeons who face a lack of established guidelines in several areas of expertise[3-8].

Immunotherapy, specifically with brentuximab vedotin (an anti-CD30 antibody-drug conjugate) was approved for first line treatment of peripheral T-cell lymphomas, and according to the guidelines it should be reserved to relapsed or refractory systemic anaplastic large cell lymphoma (ALCL), including the breast implant associated lymphoma[9-11].

This case report postulates that there could be a role for neoadjuvant immunotherapy in BIA-ALCL to control disease before surgical resection, particularly in patients with poor general conditions and advanced widespread disease. In those patients, chemotherapy could be extremely harmful (i.e., cardiotoxicity) and prevent or compromise the feasibility of a radical surgery, the cornerstone of BIA-ALCL treatment[10].

Effectiveness of the authors' treatment protocol was evidenced by full resolution of hypermetabolic areas concerning disease and complete histologic response on examination of surgical specimens. On the other hand, we have to mention that those favorable outcomes were also likely influenced by the adjuvant chemotherapy administered following radical surgery (starting 2 weeks post-operatively); furthermore, the lymphoma was locally advanced with no lymph node or more distant involvement.

U.S. Food and Drug Administration recently, and in light of the ECHELON-2 trial[12], approved brentuximab vedotin for first line treatment of peripheral T-cell lymphomas; anyway, BIA-ALCL was not taken under consideration during the trial, and the article by Caputo et al[1] was the first reporting a neoadjuvant immunotherapy for the treatment of this condition. The greatest strength of immunotherapy is the manageable safety profile when compared to chemotherapy; however, a significant improvement in progression-free survival and overall survival when compared to chemotherapy in the BIA-ALCL clinical settings has yet to be demonstrated.

Further investigations of the role of neoadjuvant immunotherapy for treatment of advanced BIA-ALCL are paramount as we find out more about this uncommon disease. Adherence to recognized BIA-ALCL guidelines ensures patients undergo the most effective treatment available; the guidelines, as the term says, should only guide a well-trained multidisciplinary team and not embed it; a tailor-made treatment plan that takes into account the patient we see beyond the disease should always be advocated.

Conflict of Interest

The Authors declare that they have no conflict of interests.

Corresponding Author: Emanuele Cigna, MD, Ph.D FACS; e-mail: emanuele.cigna@unipi.it

Financial Disclosure Statement
The authors have nothing to disclose. No funding was received for this article. None of the authors has a financial interest in any of the products, devices, or drugs mentioned in this manuscript.

References

1) Caputo GG, Alban A, D'Alì L, Mariuzzi L. Galvano F, Parodi PC. Locally advanced breast implant-associated anaplastic large-cell lymphoma: a combined medical-surgical approach. Eur Rev Med Pharmacol Sci 2021; 25: 3483-3488.
2) Swerdlow SH, Campo E, Pileri S, Lee Harris N, Stein H, Siebert R, Advani R, Ghielmini M, Salles GA, Zelenetz AD, Jaffe ES. The 2016 revision of the World Health Organization classification of lymphoid neoplasms. Blood 2016; 127: 2375-2390.
3) de Sire A, Losco L, Cisari C, Gennari A, Boldorini R, Fusco N, Cigna E, Invernizzi M. Axillary web syndrome in women after breast cancer surgery referred to an Oncological Rehabilitation Unit: which are the main risk factors? A retrospective case-control study. Eur Rev Med Pharmacol Sci 2020; 24: 8028-8035.
4) Kaciulyte J, Losco L, Maruccia M, Delia G, Lo Torto F, Di Taranto G, Caputo GG, Berchiolli R, Ribuffo D, Cigna E. Postsurgical antithrombotic therapy in microsurgery: our protocol and literature review. Eur Rev Med Pharmacol Sci 2019; 23: 4448-4457.
5) Ribuffo D, Berna G, De Vita R, Di Benedetto G, Cigna E, Greco M, Valdatta L, Onesti MG, Lo Torto F, Marcasciano M, Redi U, Quercia V, Kaciulyte J, Cherubino M, Losco L, Mori FLR, Scalise A. Dual-plane retro-pectoral versus pre-pectoral dti breast reconstruction: An Italian Multicenter Experience. Aesthetic Plast Surg 2021; 45: 51-60.
6) Losco L, Roxo AC, Roxo CW, Lo Torto F, Bolletta A, de Sire A, Aksoyler D, Ribuffo D, Cigna E, Roxo CP. Lower body lift after bariatric surgery: 323 consecutive cases over 10-year experience. Aesthetic Plast Surg 2020; 44: 421-432.
7) Losco L, Cigna E. Aesthetic refinements in C-V flap: raising a perfect cylinder. Aesthet Surg J 2018; 38: NP26-NP28.
8) Di Taranto G, Bolletta A, Chen SH, Losco L, Elia R, Cigna E, Rubino C, Ribuffo D, Chen HC. A prospective study on combined lymphedema surgery: Gastroepiploic vascularized lymph nodes transfer and lymphaticovenous anastomosis followed by suction lipectomy. Microsurgery 2021; 41: 34-43.
9) Linee di indirizzo sul percorso diagnostico terapeutico assistenziale per il Linfoma Anaplastico a Grandi Cellule associato ad impianti protesici mammari (BIA-ALCL). Ministero della Salute https://www.trovanorme.salute.gov.it/norme/renderNormsanPdf?anno=2019&codLeg=71547&parte=1%20&serie=null
10) Thibodeau R, Fan KL, Wehner PB. Stage IV breast implant-associated anaplastic large-cell lymphoma with complete pathologic response to neoadjuvant chemotherapy. Plast Reconstr Surg Glob Open 2019; 7: e2446.
11) Pro B, Advani R, Brice P, Bartlett NL, Rosenblatt JD, Illidge T, Matous J, Ramchandren R, Fanale M, Connors JM, Fenton K, Huebner D, Pinelli JM, Kennedy DA, Shustov A. Five-year results of brentuximab vedotin in patients with relapsed or refractory systemic anaplastic large cell lymphoma. Blood 2017; 130: 2709-2717. Erratum in: Blood 2018; 132: 458-459.
12) Horwitz S, O'Connor OA, Pro B, Illidge T, Fanale M, Advani R, Bartlett NL, Christensen JH, Morschhauser F, Domingo-Domenech E, Rossi G, Kim WS, Feldman T, Lennard A, Belada D, Illés Á, Tobinai K, Tsukasaki K, Yeh SP, Shustov A, Hüttmann A, Savage KJ, Yuen S, Iyer S, Zinzani PL, Hua Z, Little M, Rao S, Woolery J, Manley T, Trümper L; ECHELON-2 Study Group. Brentuximab vedotin with chemotherapy for CD30-positive peripheral T-cell lymphoma (ECHELON-2): a global, doubleblind, randomised, phase 3 trial. Lancet 2019; 393: 229-240.