EDITORIAL
DOI: 10.29289/259453942018EDIT296

ANAPLASIC LARGE CELLS LYMPHOMA ASSOCIATED WITH BREAST IMPLANTS

Linfoma anaplásico de grandes células associado a implantes mamários

Bernardo Nogueira Batista[1]*

News of a new lymphatic neoplasm associated with breast implants have worried, to varying degrees, breast surgeons around the world. Anaplastic Large Cells Lymphoma (ALCL) is a rare type of T-cell non-Hodgkin's disease that, when unrelated to breast implants, is preferentially manifested on the skin and has a good prognosis. In 10% of these cases, the disease may extend to lymph nodes and organs, with a less favorable prognosis[1].

In 1997, the first report of an anaplastic T-cell lymphoma associated with a saline implant in a patient with prior augmentation mammoplasty was published in the USA[2]. Twenty years later, a little more than a two hundred cases have been described and Breast Implant Associated ALCL (BIA-ALCL) has been recognized as an independent entity in the classification of lymphoid neoplasms of the World Health Organization (WHO)[3].

The impact this new entity will have on the public is not yet clear, but it has become a growing concern for the modern practice of breast surgery. To date, little is known about the pathology, given the rarity of its occurrence. It is now estimated that the prevalence of the disease is 1 case in every 30,000 women with breast implants[4]. However, this number has increased rapidly as efforts by some regulatory agencies and medical societies abroad have intensified to standardize and centralize information. The National Comprehensive Cancer Network has recently published a consensus for identification and management of suspected cases[5].

On average, the diagnosis of a BIA-ALCL occurs 10 years after implantation. The most frequent clinical presentation is that of a late seroma leading to an increase in breast volume. Any peri-implant seroma that occurs more than one year after placement of the prosthesis should be submitted to aspiration and anatomopathological and immunohistochemical studies. Pathologists should be informed about the clinical suspicion of BIA-ALCL and the specific tests required, as these are not routinely performed on breast specimens or on traditional lymphoma panels. In the collected fluid, ALK and flow cytometry for CD30 must be performed. BIA-ALCLs show abundant pleomorphic, CD30-positive and ALK-negative lymphocytes. It is important to emphasize that, in the presence of a late seroma, it's benign presentation is still the most likely diagnosis. However, suspicion is very important, and, if confirmed, the patient will require additional testing before surgery and a multidisciplinary treatment. Inadequate treatment of a BIA-ALCL can have tragic consequences.

Any confirmed case should be discussed in a multidisciplinary group. The evidence about the need/efficiency of the different therapeutic options is still weak. It is recommended to perform a preoperative PET scan for further comparison during follow-up. Removal of the implant with total capsulectomy seems to be sufficient to treat BIA-ALCL in cases where the disease is restricted to the capsule (stage I). BIA-ALCLs have been reported in association with all types of textured implants. However, studies suggest that some manufacturers may present a higher risk than others[6]. No case has been confirmed in patients who have used only smooth implants.

Another form of presentation, present in about 15% of the cases, is the presence of a solid mass with or without an associated seroma. It is not yet clear whether these are different forms of the disease or parts of its spectrum, but mass presentation has been associated with worse prognoses. In these cases (stage II), in patients who have evidence of disease outside the breast (stages III and IV) and in cases where there is suspicion of incomplete resection of the disease, the association of chemotherapy and/or radiotherapy should be discussed. Other less frequent presentations were reported, demonstrating the importance of surveillance by those in contact with patients with breast implants.

Frequent follow-up of patients with a confirmed BIA-ALCL diagnosis should be maintained after treatment to confirm remission of the disease. When available, follow-up should include a PET scan every 6 months for 2years. In the vast majority of cases, prognosis

BIA-ALCL: Breast Implant Associated Anaplastic Large Cell Lymphoma

[1]Sírio Libanês Hospital– São Paulo/SP, Brazil.
***Corresponding author:** bernardo.psnbatista@hsl.org.br

Conflict of interest: nothing to declare.
Received on: 11/18/2017. **Accepted on:** 11/22/2017

is good. Follow-up data are still inconsistent to accurately determine disease-free survival and its specific mortality. Cases of recurrence and even some deaths have been reported.

The way the media and the general public will respond to information about the existence of a rare neoplasm associated with breast implants will greatly depend on our ability to transmit and, more importantly, to educate the population. The Brazilian breast implant market is the second largest in the world and one of the most complex, with devices from 12 different manufacturers being sold at present times. Informally, we have been informed of at least 11 confirmed cases, one of them in a patient with an augmentation mammoplasty in whom we treated an ALCL last year[7]. The patient is in remission and being followed up. All these cases have in common a more advanced presentation and/or improper handling at the time of the first manifestation. The system of pharmacovigilance of breast implants of the National Agency of Sanitary Surveillance has not registered any case so far.

These data reinforce the importance of a broad and clear discussion to raise awareness of the breast surgery community about this new entity. We will all be exposed to possible cases of BIA-ALCL in the near future and eventually we will be inquired about the risks associated with the use of breast implants.

REFERENCES

1. Leberfinger AN, Behar BJ, Williams NC, Rakszawski KL, Potochny JD, Mackay DR, et al. Breast implant-associated anaplastic large cell lymphoma: a systematic review. JAMA Surg. 2017. DOI: 10.1001/jamasurg.2017.4026
2. Keech JA, Creech BJ. Anaplastic T-cell lymphoma in proximity to a saline-filled breast implant. Plast Reconstr Surg. 1997;100(2):554-5.
3. Swerdlow SH, Campo E, Pileri SA, Harris NL, Stein H, Siebert R, et al. The 2016 revision of the World Health Organization classification of lymphoid neoplasms. Blood. 2016;127(20):2375-90. DOI: 10.1182/blood-2016-01-643569
4. Doren EL, Miranda RN, Selber JC, Garvey PB, Liu J, Medeiros LJ, et al. U.S. Epidemiology of breast implant-associated anaplastic large cell lymphoma. Plast Reconstr Surg. 2017;139(5):1042-50. DOI: 10.1097/PRS.0000000000003282
5. Clemens MW, Horwitz SM. NCCN consensus guidelines for the diagnosis and management of breast implant-associated anaplastic large cell lymphoma. Aesthetic Surg J. 2017;37(3):285-9. DOI: 10.1093/asj/sjw259
6. Loch-Wilkinson A, Beath KJ, Knight RJ, Wessels WL, Magnusson M, Papadopoulos T, et al. Breast implant-associated anaplastic large cell lymphoma in Australia and New Zealand: high-surface-area textured implants are associated with increased risk. Plast Reconstr Surg. 2017;140(4):645-54. DOI: 10.1097/PRS.0000000000003654
7. Batista BN, Garicochea B, Aguilar VL, Carvalho FM, Millan LS, Fraga MF, et al. Report of a case of anaplastic large cell lymphoma associated with a breast implant in a Brazilian patient. Rev Bras Cir Plást. 2017;32(3):445-9. DOI: 10.5935/2177-1235.2017RBCP0073