

Characteristics and Treatment of Patients with Breast Implant-Associated Anaplastic Large Cell Lymphoma Presenting with Aggressive Features

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INTRODUCTION: Breast implant-associated anaplastic large cell lymphoma (BI-ALCL) is a T-cell lymphoma arising around breast implants. Although initially considered as an “indolent” lymphoma, a subset of patients display more insidious disease marked by persistent and recurrent growth refractory to treatment.^{1,2,3,4} The purpose of this study is to evaluate cases of BI-ALCL presenting with aggressive features: bilateral disease, lymph node involvement, and/or death of disease.

MATERIALS AND METHODS: A retrospective review of all published cases from 1997 to 2015 and unpublished cases at our institution of BI-ALCL was performed and patients with aggressive features were compared to patients without aggressive features. Patient demographics, treatment, and outcomes were evaluated.

RESULTS: We identified 27 patients with aggressive features and included bilateral disease (n=3), lymph node involvement (LNI, n=24), and death of disease (n=6). 65 patients without aggressive features were selected as a comparative group. Treatment types for the aggressive-variant BI-ALCL patients were as follows: definitive surgery, n=16 (59.3%); limited surgery, n=19 (70.4%); chemotherapy, n=24 (88.9%); salvage chemotherapy, n=11 (40.7%); radiation, n=15 (55.6%); autologous stem cell transplant, n=5 (18.5%). The rates of complete remission (CR) were 18/27 (66.7%) for patients with aggressive features and 63/65 (97%) for patients without aggressive features ($p<0.0001$). No patients who received definitive surgery died of disease at last follow up. The rates of CR for comparative group, bilateral group, and LNI group were: 63/65 (97%), 2/3 (67%, $p<0.001$) and 16/24 (67%, $p=0.128$), respectively. Patients with aggressive features had longer time from diagnosis to definitive surgery (21 vs. 8 months, $p=0.039$) and had less frequency of definitive surgery (59% vs. 88%, $p=0.004$).

CONCLUSION: Definitive surgery with implant removal and total capsulectomy results in improved survival in patients with BI-ALCL, including those presenting with aggressive features. A delay in appropriate treatment of patients with BI-ALCL can result in progression to aggressive features such as lymphadenopathy. The benefit of adjuvant chemotherapy and radiation for patients with aggressive-variant ALCL is yet to be defined.

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