Epidemiology and Risk factors for breast implant-associated anaplastic large cell lymphoma (BIA-ALCL) in Australia & New Zealand

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Introduction: Breast implant-associated ALCL (BIA-ALCL), is a very rare type of CD30 positive T cell lymphoma associated with breast implants [1-4]. It is classified as a mature peripheral T cell lymphoma (PTCL) within the Non-Hodgkin lymphoma (NHL) group based on the current WHO recommendations. Current international incidence is unknown with paucity of data related to relative risk based on actual sales figures of well-known implants. Here we describe a well-defined cohort of definitive patients with BIA-ALCL in Australia and New Zealand and demonstrate the true incidence of various implants with concomitant notable findings.

Materials and methods: All described cases of definitively confirmed BIA-ALCL were collated and cross checked against tertiary referral centre pathology, cytology, flow cytometry and immunohistochemistry reports and surgical notes. Implant demographics including type, texture, duration of exposure and relative risk to hypothetical lymphoma pathogenesis were retrieved and analysed.

Results: Thirty five definitive cases of BIA-ALCL were retrieved and presented during the study. Thirty one definitive cases with complete data sets were utilised. More than 60% of BIA-ALCL cases were attributed to one texturing technique with a three-fold higher incidence in ALCL in total across both countries. Industry sanctioned sales figures were used to derive an absolute relative risk of developing BIA-ALCL.

Conclusion: Breast implant- associated ALCL is a very real disease entity that is not merely a spectrum of inflammation. Data remains elusive and lends itself to poor regulatory guidelines and recommendations for breast augmentation/ reconstruction risk. Here we describe the first data set of patients representing the lowest possible incidence based on implant insertion rates in a defined population. Our findings illustrate and consolidate long held theories of causation and describe an epidemiologically significant result.

References:

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