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POS0290 PREDICTING RISK FACTORS OF MALT LYMPHOMA IN SÖJÖRNEN’S SYNDROME

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Background: Primary Sjögren Syndrome (SS) is a slowly progressing systemic autoimmune disease complicated by lymphoma, with mucosa associated lymphoid tissue (MALT) type being the most common lymphoma form. Several predictors related to pSS associated lymphomas have been described, but there are no studies focusing on specific risk factors for the MALT histologic subtype.

Objectives: To identify predictors at SS diagnosis for MALT lymphoma development in pSS patients using simple clinical features.

Methods: From 815 SS patients of a single center fulfilling the 2016 ACR/EULAR criteria, those with subsequent development of MALT lymphoma according to the 2016 WHO classification were identified and matched in 1:2 ratio, with non-lymphoma SS controls patients according to age, disease duration from SS diagnosis and gender. Lymphoma patients diagnosed within a year from SS diagnosis were excluded from the current study. Clinical, laboratory, histologic data as well as the ESSDAI scores at the time of SS diagnosis were recorded and compared between lymphoma and non-lymphoma patients. Independent lymphoma predictors were identified by a data driven Fast Correlation Based Feature selection (FCBF)/Logistic Regression (LR) algorithm.

Results: A unified dataset of 57 MALT lymphoma patients and 114 non lymphoma controls along with 364 MALT lymphoma controls was generated. The median age of SS diagnosis and the disease duration from SS diagnosis to lymphoma diagnosis (lymphoma group) or last follow up (control group) was 50.5 years old (range 25-77) and 7 years (range 0-30) for the control group and 50 years old (range 24-70) and 8 years (range 1-30) for the lymphoma group, respectively. MALT lymphoma patients presented more frequently with palpable purpura (23.2% vs 5.3%, p=0.001), cryoglobulinemia (30.2% vs 1.6%, p=0.0001), low C4 serum levels (62.9% vs 32.1%, p=0.0003), rheumatoid factor (78.6% vs 56.1%, p=0.01), anti-La/SSB antibodies (33.9% vs 50.8%, p=0.049) and higher median ESSDAI score (5 vs 2, p=0.0001). In contrast, autoimmune thyroiditis was more prevalent in controls (48.2% vs 16.6%, p=0.004). The FCBF/LR model revealed cryoglobulinemia (p=0.03) and ESSDAI at SS Diagnosis (p=0.0001) as the only independent lymphoma predictors.

Conclusion: MALT is the predominant pSS related lymphoproliferative histologic type, associated with systemic disease activity and vasculitic manifestations at SS diagnosis. Cryoglobulinemia and ESSDAI score were proven independent risk factors for MALT lymphoma development.

Table 1. An FCBF-based multivariable logistic regression analysis results for investigating risk factors for MALT lymphoma development

<table>
<thead>
<tr>
<th>Prominent feature</th>
<th>Regression coefficient</th>
<th>Odds ratio</th>
<th>p-value</th>
<th>CI low</th>
<th>CI upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cryoglobulinemia</td>
<td>1.67</td>
<td>5.342</td>
<td>0.032*</td>
<td>1.18</td>
<td>24.327</td>
</tr>
<tr>
<td>Total ESSDAI at diagnosis</td>
<td>0.28</td>
<td>1.318</td>
<td>&lt;0.001*</td>
<td>1.208</td>
<td>1.439</td>
</tr>
<tr>
<td>Kidney involvement</td>
<td>0.07</td>
<td>0.899</td>
<td>0.101</td>
<td>0.521</td>
<td>0.351</td>
</tr>
</tbody>
</table>

* p < 0.05 (95% confidence interval). The rest of the features that participated in the analysis include the following: Palpable purpura, Low C4, Salivary gland enlargement, Lacimal gland enlargement, ANA Titters, RF, Focus score at Sjögren diagnosis, PNS involvement, Anti-La. Disease duration from SS onset to SS diagnosis. Neutrophils=1500, Autoimmune thyroiditis, Lung involvement – intestinal disease Type. Lymphocytes<1000, Lymphopenopathy fixed, Arthralgias, Dry eyes, Raynaud, Gender, Age at Sjögren diagnosis, Dry mouth, Aca. Hb<12.0 g/dl, ANA. Disease duration from SS Diagnosis to Lymphoma diagnosis or last follow up, Anti-Ro, Arthritis, WBC<4000/uL, Lung involvement bronchocentric disease, Intestinal renal disease. PLT<100.000/µL, Liver involvement-PBC, Liver involvement–autoimmune hepatitis, CNS involvement."AUC=0.78
Background: Breast cancer is the most common cancer affecting women both before and after the menopause. Aromatase inhibitors (AIs) used as adjuvant therapy cause bone loss and increase the risk of osteoporosis (OP) (1).

Objectives: To assess the bone status and the frequency of OP in breast cancer patients using AIs.

Methods: We conducted a retrospective study in the rheumatology department, over 5 years (2016-2020).

Inclusion criteria: patients followed for breast neoplasia in oncology department on AIs therapy and referred to rheumatology department for bone evaluation. All of these patients underwent an evaluation of bone mineral density (BMD) and phosphocalcic assessment.

Exclusion criteria: patients treated by another type of hormone therapy and having other risk factors for OP.

Results: 200 breast cancer women were enrolled for the study, 92 patients (46%) were treated with AIs, the average age was 58.22 years (41 - 75 years) with an average age of discovery of the breast cancer of 46.75 years and the average time between the start of AIs therapy and the diagnosis of OP was 21.6 months. The characteristics of the patients are summed up in Table 1. 97% of patients were postmenopausal and 38% of them had menopause secondary to treatment.

In AIs users, 85 patients (92.3%) were osteoporotic, and 11% had bone fractures. In regard to osteodensitometry measurement, lumbar spine was the most affected site (88%) with mean T score of -2.98 and mean BMD of 0.854, followed by femoral neck (17%) with mean T score of -2.8 and mean BMD of 0.740 and total hip (14%) with mean T score of -3.10 and mean BMD of 0.497. The cancer was metastatic in 15.18% patients, 75% of the group had bone metastasis and 25% had visceral metastasis. The phosphocalcic status of the osteoporotic patients was: mean calcemia: 92.83 mg / l, mean calcitriol: 131.8 mg / 24h, mean phosphatemia: 48.09 mg / l, mean 25 OH Vit D level: 17.98 mg / ml, mean PTH: 79 pg / ml.

Osteoporotic patients were treated with bisphosphonates, 60% women had received Alendronate, 17% Risedronate and 12% Zoledronate in addition to die- tary measures and correction of calcium and vitamin D deficiency.

Conclusion: AIs are correlated with a high risk of OP and fractures in 30% of patients (2), the frequency of OP in our series is estimated at 42.5%. Assessment of bone status and OP clinical risk factors should be systematic in all breast cancer patients receiving adjuvant AIs therapy.

Bisphosphonates appear to be beneficial in treating secondary OP, in preventing bone fractures, and in reducing the incidence of breast cancer bone metastases.

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