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Study of PD1 and PDL1 Expression in Cutaneous T-cell Lymphomas

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INTRODUCTION

It is known that one of the most difficult issues is the differential diagnosis of cutaneous T-cell lymphomas both within the group itself and with other non-neoplastic skin diseases. Even the use of T-cell receptor gene rearrangement studies by PCR and NGS does not allow with 100% probability of distinguishing between a true tumor process and a clonal expansion of T-lymphocytes in inflammatory skin lesions. In Sézary syndrome (SS), PD1 expression by T cells was significantly higher than in other etiologies. However, data on the expression of PD1 and PDL1 in other forms of cutaneous T-cell lymphomas have not been found.

AIM

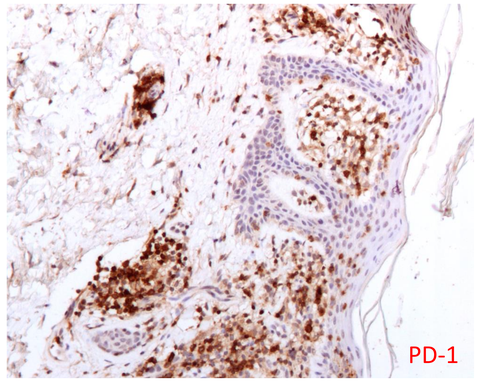
To evaluate the expression of PD-1 and PD L1 by immunohistochemical examination on skin biopsies with various stages of GM and CC and in the group of non-tumor dermatoses.

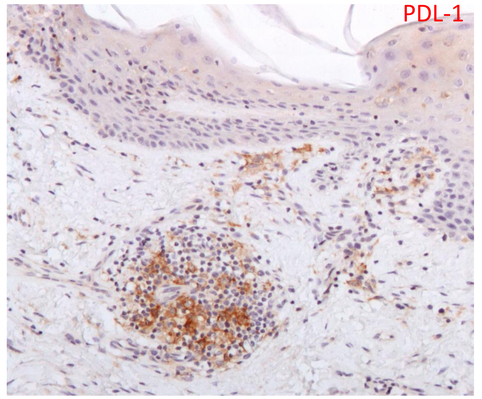
METHOD

Our study included 35 patients. Among the 35 patients, 17 were diagnosed as mycosis fungoides (MF), 4 patients as primary cutaneous peripheral T-cell lymphoma NOS (PTCL NOS), 3 as lymphomatoid papulosis (LyP), 1 as erythrodermic mycosis fungoides (E-MF) and 5 as SS, and 4 as benign inflammatory dermatoses (BID).

RESULTS

PD1 expression was found to be more than 20% in 80% of the SS samples, while the expression of the ligand (PDL1) was comparable. At the early stage of MF, PD1 expression was detected in more than 20% of 83% of the samples, but there was a low expression ligand (no more than 15%). There was no increased expression of both PD1 and PDL1 in BID, PTCL, and LyP.





CONCLUSIONS

In this study, we report the PD1 expression as a tool for differential diagnosis between SS and other etiologies including MF, and between early stages of MF and BID. Also, it was noted that the detection of high expression of PDL1 correlates with an unfavorable form of the disease. In all cases of SS, a comparable high expression of both PD1 and PDL1 was noted, which also affects the aggressive course of the disease. Whereas, in a favorable MF variant (patch stage), despite high PD1 expression, PDL1 expression was below the threshold.

CONTACT INFORMATION

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REFERENCES

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