AB033. PS01.15: Relevance of adhesion molecules for killing of thymoma and thymic carcinoma

Katja Simon-Keller, Fabian Lang, Djeda Belharazem, Alexander Marx

Institute of Pathology, Medical Faculty Mannheim, University of Heidelberg, Mannheim, Germany

Abstract: Thymoma and thymic carcinomas (TCs) are rare epithelial tumors of the thymus. TCs are less prevalent but more aggressive, and less frequently resectable than TC. Since unresectable TC is usually refractory to classical and targeted long-term treatment approaches and, therefore, commonly fatal, immunotherapeutic options using checkpoint inhibitors are currently being investigated. However, relevant biomarkers have not yet been identified. Since checkpoint inhibitor therapy is thought to unleash a cytotoxic T cell mediated attack on tumor cells, we have been looking for tissue-based biomarkers through testing the efficiency of cytokine-induced killer cells (CIKs) and NK cells to kill the thymic carcinoma cell line, 1889c. Cytotoxicity was measured after co-culture with the tumor cells via MTT and FACS assay. To reveal possible immune resistance mechanisms except for PD-L1 deficiency, we determined expression of typical adhesion molecules, such as CD54 and CD56 by qRT-PCR, western blot and immunohistochemistry in biopsies and 1889c cells, since adhesion molecules can dramatically modify cytotoxic effects. The results of *in situ* and functional analyses will be discussed under an immunotherapeutic biomarker perspective.

Keywords: Thymoma; thymic carcinoma (TC); CD54; CD56

doi: 10.21037/med.2017.AB033

Cite this abstract as: Simon-Keller K, Lang F, Belharazem D, Marx A. Relevance of adhesion molecules for killing of thymoma and thymic carcinoma. Mediastinum 2017;1:AB033. doi: 10.21037/med.2017.AB033