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摘要:

目的: 探讨硼替佐米提高耐药K562/ADM细胞对NK细胞杀伤敏感性的可能机制。方法: 流式细胞术和real-time PCR检测硼替佐米处理前后K562/ADM细胞表面MHC I类链相关分子A(major histocompatibility complex class I chain-related molecule A, MICA)蛋白和mRNA的表达, LDH释放法检测硼替佐米处理前后K562/ADM细胞对NK细胞的杀伤敏感性。结果: 硼替佐米处理后, K562/ADM细胞表面MICA蛋白表达率上升[(17.03±4.94)% vs (23.77±5.26)% , P <0.05]; 处理后K562/ADM细胞 MICA mRNA的表达水平是处理前的(2.03±0.33)倍。效靶比为10:1、20:1时, NK细胞对硼替佐米处理后的K562/ADM细胞的杀伤率上升[(23.22±3.03)%、(30.30±0.74)% vs (33.69±1.28)%、(41.40±1.97)% , P <0.05]。结论: 硼替佐米提高耐药K562/ADM细胞对NK细胞杀伤的敏感性, 其机制可能与硼替佐米上调K562/ADM细胞MICA表达有关。

关键词: [硼替佐米](#) [NK细胞](#) [MHC I类链相关分子A\(MICA\)](#) [耐药K562/ADM细胞](#)

Bortezomib increases cytotoxic sensitivity of drug-resistant K562 /ADM cells to NK cells and its mechanisms [Download Fulltext](#)

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Abstract:

Objective : To investigate the effects of bortezomib on the cytotoxic sensitivity of drug-resistant K562/ADM cells to natural killer (NK) cells and the underlying mechanisms. Methods: The expressions of MICA protein and mRNA on K562/ADM target cells before and after incubation with bortezomib were detected by flow cytometry and real-time PCR, respectively. The cytotoxic sensitivity of K562/ADM cells treated with or without bortezomib to NK cells was measured by LDH releasing assay. Results: The expression rates of MICA protein on K562/ADM cells incubated with bortezomib increased from (17.03±4.94)% to (23.77±5.26)% (P <0.05). The mRNA expression of MICA on K562/ADM cells treated with bortezomib increased (2.03±0.33) times. At the E : T ratio of 10 : 1 and 20 : 1, the cytotoxic sensitivity of K562/ADM cells to NK cells increased from (23.22±3.03)% and (30.30±0.74)% in untreated cells to (33.69±1.28)% and (41.40±1.97)% in bortezomib-treated cells, respectively, showing significant differences (P <0.05). Conclusion: Bortezomib can up-regulate the MICA expression in K562/ADM cells and thus may enhance the cytotoxicity of NK cells against K562/ADM cells.

Keywords: [bortezomib](#) [nature killer cell](#) [major histocompatibility complex class I chain-related molecule A\(MIVA \)](#) [drug-resistant K562/ADM cell](#)

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