Tumor Infiltrating Lymphocytes Show in vitro Optimal Activity Against Tumor Cells in Multiple Cancers

BACKGROUND

Tumor infiltrating lymphocytes (TILs) have been shown to be a promising therapy for the treatment of melanoma and other cancers. These cells are able to recognize and attack tumor cells, making them a potent tool in cancer immunotherapy. Previous studies have demonstrated the role of TILs in the destruction of tumor cells, but their efficacy in multiple cancer types remains to be fully explored.

METHODS

In this study, TILs were isolated from various tumor biopsies and cultured in vitro. The activity of TILs against tumor cells was assessed using a cytotoxicity assay. Results were compared to those obtained from TILs derived from normal tissue samples.

RESULTS

1. TILs from various cancer types were able to effectively kill tumor cells in vitro.
2. The activity of TILs was found to be highest in tumors with high levels of infiltration.
3. TILs showed a selectivity for tumor cells, with minimal cytotoxicity against normal tissue.
4. The optimal concentration of TILs for tumor cell lysis was determined to be 1:10.

CONCLUSION

Tumor infiltrating lymphocytes exhibit promising activity against tumor cells in multiple cancer types. Further studies are needed to evaluate the clinical potential of TILs as a therapeutic modality.

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Table of Contents

Functional Characterization of TILs

Figure 1: TILs from tumor samples are cultured in vitro.

Figure 2: Activity of TILs is assessed using a cytotoxicity assay.

Figure 3: The optimal concentration for TILs is determined.

Figure 4: TILs exhibit selectivity for tumor cells.

External

Supplementary information is available online.