

Research Article

Effect of Glucose Oxidase on the Cytokine Profile and Cholesterol of Monocytes in Liver Cancer

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Abstract

Introduction: Cancer has an extremely important human and socio-economic impact. It is due to several cellular disturbances causing uncontrollable proliferation, which stimulate immune system elements including monocytes that can play a dual role either in the elimination or progression of cancer cells [1], these disturbances affect a variety of functions such as glucose metabolism [2].

Keywords: Liver cancer, Monocyte, GOx, Cytokines, Cholesterol

Objectives

This work hopes to investigate the effect of glucose oxidase at the level of the monocyte on the tumor growth thus determining its impact on the glycolysis activity and on the mitochondrial metabolism.

Aim: The aim of this study is to show the role of GOx in the polarization of monocytes in contact with tumor cells.

Materials and methods

Monocytes isolated from the blood of the cancer patient were co-cultured with the tumor epithelial cells isolated from a biopsy of the liver cancer, in a culture medium supplemented or not with GOx.

Results

GOx induced an increase in the **INF- γ** and decrease of **IL-10** as well as in **NO** and **Arginase** in the presence of Glucose oxidase compared to thus without GOx, the Cholesterol in microenvironment was decreased in presence of GOx.

Conclusion

In conclusion, our results showed an pro-inflammatory effect was reported in monocytes in contact with liver tumor epithelial cells.

References

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