



Assessment of Toll like receptors (TLR-8 and TLR-9) in group of patients with different types of tumor in Babylon Province of Iraq

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Abstract:Background: Toll-Like Receptors (TLRs) play a critical role in the early innate immune response to invading pathogens. Significant progress has been made over the past years in the understanding of TLR function. TLR agonists are currently under investigation in anticancer therapies for their ability to activate immune cells and promote inflammation.

Objectives: Assessment the state of Toll-Like Receptors (TLR-8 and TLR-9) in patients with different type of tumors and their relation to patient's demographic and clinical features.

Patients, material and methods: Case control study among all newly diagnosed patients with different types of tumor registered in the malignant registry center of Babylon clinically diagnosed and confirmed by consultant physician including 210 patients conducted from January until August 2016. Among All patients are eligible for study choosing (100) patients and exclusion the others because of either they are start medication for tumor, have more severe cases and some refuse participation in the study , was there in associated with 100 control groups recruited from same geographical area of the patients, mainly are patient relatives, age and sex matched, selected randomly. Consent was taken from all patient and control in addition to the center permission for this study. Serum level of TLR-8 and TLR-9 was assess by ELISA in the laboratory department of Merjan medical city/ immunology unit using specific available kits.

Results: Mean age of patients was 49.9 years mostly at 40s age group, no significant statistical difference according to the gender of patient and control groups. More patient and control group are from urban area. Majority of patients have breast malignancy (52%) and the other sites represented different sites of uterine, colonic, liver, ovarian, thyroid, stomach, and gall bladder and prostatic malignancies. Ten percent of patient have family history of malignancy and chronic disease associated with malignancy are present in 44% of patient.

Conclusion: Significant low concentration of TLR8 and high concentration of TLR9 was found in different types of tumors in initial their diagnosis with obvious significant correlation of high TLR9 concentration with demographic and clinical features of the patients while not to TLR8 level. Assessment of such types of receptors may play a role in anti-tumor therapy and research of related aspect.

Keywords: Toll-Like Receptors, TLR, Babylon, Iraq.