

Tear function tests in pregnant women with gestational diabetes mellitus

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Objectives:

Gestational diabetes mellitus (GDM) is a disorder, which is described as impaired glucose tolerance, which firstly occurs first time during pregnancy. We aimed to evaluate the tear function tests in GDM.

Methods:

Pregnant women with GDM and healthy pregnant women who were matched in both age and gestational age, were enrolled into the study. The women with ocular or systemic disorders that may affect the tear function tests, and who use topical medications were excluded from the study. All of the pregnant women answered the OSDI questionnaire; afterwards they underwent a detailed ophthalmic examination including Schirmer, tear break-up time (TBUT), tear film osmolarity (TFO), and ocular surface disease index (OSDI) score by the same ophthalmologist.

Results:

Forty-six pregnant women with GDM whose mean age of 30.43 ± 4.75 years and 36 healthy pregnant women whose mean age of 28.83 ± 4.42 years were enrolled into the study. The mean gestational ages were 25.80 ± 1.61 weeks and 26.19 ± 1.43 weeks respectively. There were not statistically significant differences between two groups in terms of age and gestational age. The mean fast blood glucose and the mean HbA1c levels were statistically significantly higher ($p < 0.001$, for each) in GDM group (105.17 ± 7.28 mg/ml and $5.57 \pm 0.50\%$) compared to healthy group (70.17 ± 6.54 mg/ml and $4.93 \pm 0.29\%$). The levels of Schirmer test, TBUT test, TFO and OSDI score were 11.20 ± 4.93 mm, 5.59 ± 2.16 sec, 309.65 ± 14.80 mOsm/L and 9.59 ± 9.69 points in GDM group, and 12.33 ± 5.33 mm, 5.67 ± 2.68 sec, 308.36 ± 16.00 mOsm/L and 10.62 ± 8.66 points in healthy group. There were not statistically significant differences in any of the tear function tests between two groups.

Conclusions:

To the best of our knowledge, there is no study in the literature about the effects of GDM on dry eye parameters. GDM seems to be no negative effects on tear function tests

